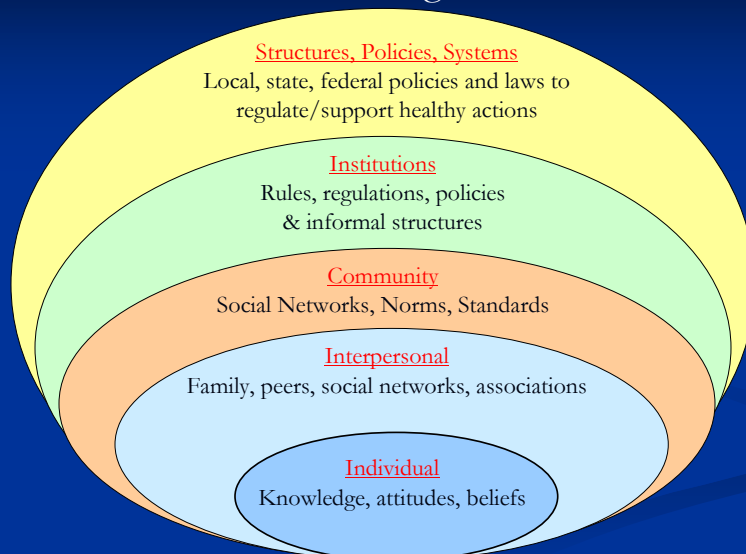


# Population-Based Obesity Research

Current Initiatives... Future Opportunities...

Eugene C. Fitzhugh  
Department of Exercise, Sport & Leisure Studies

## Population-Based Obesity Research from the Social-Ecological Model



McLeroy, KR, Bibeau, D, Steckler, A., & Glanz, K. (1988). Health Education & Behavior, 15(4), 351-377

# UTK Population-based Obesity Research

- Collaboration from 2005 to current
  
- Departments
  - Nutrition
  - Industrial & Information Engineering
  - Social Work
  - Family & Consumer Sciences (Extension Service)
  - Advertising & Public Relations
  - Psychology
  - Educational Psychology & Counseling
  - Exercise, Sport, & Leisure Studies
  - Economics

# Youth Can!

- Sonya Jones (PI)
  - Spence & TDOE (Co-PIs)
  
- Participatory planning process leading to youth-led dietary interventions within a Coordinated School Health Program
  
- Quasi-experimental Study
  - 3 control schools
  - 2 experimental schools (participatory planning process within youth-led dietary interventions)
  
- Data Collection
  - 24-hour dietary recalls & surveys
  - Anthropometric measures
  
- Significant Improvement in dietary intake
  - Increased fruit consumption
  - Less energy intake & food consumption



## Worksite Wellness Intervention Program for Impact of Obesity, Nutrition, & Physical Activity on Productivity

- Adedeji Badiru (PI)
  - Moustaid-Moussa, Greer, Fitzhugh, & Wodarski (Co-PIs)
- 2004 & 2006 unfunded proposal to USDA Human Nutrition & Obesity Program
- Examine the impact of a comprehensive worksite wellness program targeting nutrition & physical activity (obesity focus) on work productivity

## Promoting Healthy, Happy U.T. Graduates: Combating Stress and the Freshman 15

- Lisa Jahns (PI)
  - Haley, Fisher, Wetherall, Lawler, Evans, Fitzhugh, Thompson, & Howley (Co-PIs)
- Internally Funded by UTK (2006)
- Longitudinal, split-panel study of weight change, stress, and health & academic behaviors among incoming freshman at UTK.
- Online survey combined with qualitative methodology
  - Clinical-based energy expenditure study (Life in Motion)
- Results are currently being studied with intent to submit for NIH funding

## Improving the Built Environment: An Experiment Targeting Inactivity & Obesity

- Eugene Fitzhugh (PI)
  - Evans & Bassett (Co-PIs)
- 2005 & 2006 NIH proposal (unfunded)
  - Pilot work funded by UT Office of Research
  - Current funding from UT Southeastern Transportation Center
- Do improvements in the built environment (greenway) lead to:
  - Increased physical activity?
  - More walking/cycling vs. automobile trips?
  - Less automobile emission?
- 3-year, prospective, cohort design involving one intervention & two control neighborhoods
- Data collection ongoing for 2-year follow-up
  - Telephone survey (N=996)
  - Direct observation
  - Infrared measurement of PA on greenway
  - Travel diaries

## Utilizing a Competitive, Creative After-school Program as a Model for a Nutrition & Physical Activity Education Program

- Carol Costello (PI)
  - Moustaid-Moussa, Greer, Fitzhugh, & Bassett (Co-PIs)
- Proposal submitted to USDA (Under Review)
- Evaluate a creative after-school program that promotes healthy lifestyles that prevent childhood overweight
  - Piloted on 5,000 children (K-12) who participate in “Destination ImagiNation”
  - Findings will lead to an intervention to be tested statewide via Extension

## Physical Activity Dose-Response Contrasts between Waist Circumference & Body Mass Index: 1999-2004 NHANES

- Fitzhugh & Thompson
  
- Population-Based Obesity Study using secondary data
  - National Health & Nutrition Examination Survey (NHANES)
  - N=13,490 adults (20+ years of age and over)
  
- NHANES has in-depth data on U.S. population (2 months and above):
  - Physical activity
  - 24-dietary recall (2-days)
  - Body Composition (DXA, Bioimpedance, & BMI)
  - Laboratory (over 400 measures derived from blood, urine, & swabs samples)

## Obesity Research Opportunities

New Developments... Community Partners...

## East TN 2-Step: Eat Smart... Move More

- Knox County Health Department & ET Regional Health Departments
  - Strong UTK presence (Betsy Haughton & Ed Howley)
  - Actively Meeting to prioritize community-related goals
  - Knox County Behavior Risk Factor Survey
- Obesity-Related Recommendations for...
  - Schools
  - Community groups
  - Worksites
  - Healthcare systems
  - Surveillance
- Local health councils



## School-based Research

- New State Policies
  - School Vending-Machine (House Bill 2783)
  - Coordinated School Health Program (House Bill 674)
  - Physical Activity Instruction Time (House Bill 3750)
- Knox County Health Department Initiatives
  - BMI Surveillance (biannual)
  - KC Youth Behavior Survey
- Knox County Public School Initiatives
  - School Nurse Network
  - Sports, Play & Active Recreation for Kids (SPARK) curriculum being piloted in KC



# Obesity Research Funding

State and National Sources

## State Sources of Potential Funding

- Centers for Disease Control & Prevention
  - TN Department of Health (TDOH)
  - TN Department of Education (TDOE)
  - 2003 TN applied for CDC monies via a 'state obesity plan'
    - Proposal was not funded due to limited scope of plan & poor evaluation component
- Blue Cross/Blue Shield Tennessee Health Foundation
  - Currently funding initiatives that focus on childhood obesity initiatives at the state level
  - <http://www.bcbst.com/about/community/TN-health-foundation>

## Federal Sources of Potential Funding

- National Institutes for Health
  - Strategic Plan for NIH Obesity Research <http://obesityresearch.nih.gov/>
  - Research on the Economics of Diet, Activity, and Energy Balance (R01)
    - economic analysis... relevant to public health policy are encouraged
  - School-based Interventions to Prevent Obesity (R01)
    - encourages partnerships between academic institutions and school systems in order to develop & implement controlled, school-based intervention strategies.
- USDA -- Human Nutrition and Obesity Research Program
  - (<http://www.csrees.usda.gov/fo/humannutritionobesitynri.cfm>)
- Maternal & Child Health Bureau Research Programs (USDHHS)
  - (<http://mchb.hrsa.gov/grants/default.htm>)

## Other Sources of Potential Funding

- Robert Wood Johnson Foundation
  - Active Living  
(<http://www.activelivingresearch.org/alr/grantsearch/grantopportunities/current>)
  - Childhood Obesity  
(<http://www.rwjf.org/programareas/programarea.jsp?pid=1138>)