ARIC
Physical Activity Measurement
By: Kelly Evenson, Sue Wolf

February 7, 2005
1:45-2:30pm
Schedule

- Overview from Kelly
- Practice
  » certified (interviewer) paired with not certified (participant)
- Pointers from Sue
- Certification

Work activity was higher among African American women and men, and leisure activity was lower, when compared to White women and men.

Those with the most occupational activity performed the least amount of leisure activity.

Emphasizes the importance of measuring occupational activity.
Examples of ARIC Findings to Date (2)

- Evenson et al (2002)
- First study to examine effect of retirement on physical activity patterns
- Among those that retired, sports participation and television watching increased over the 6 years, as compared to those who were still working
- Retirees were also more likely to adopt activities if inactive and maintain activity
Examples of ARIC Findings to Date (3)

- Evenson et al (1999)
- Ischemic stroke incidence rates were highest among those reporting the lowest levels of sport, leisure, and work activity at visit 1
- Physical activity was weakly associated with a reduced risk of ischemic stroke
Examples of ARIC Findings to Date (4)

- Folsom et al (1997)
- Regular physical activity was associated with a reduced risk of coronary heart disease (CHD)
- The sport and leisure scores were not associated with CHD among African Americans
Examples of ARIC Findings to Date (5)

- Pereira et al (1999)
- Leisure time physical activity reduced the odds of becoming hypertensive over 6 years among White men.
- No association found with White women or African American women or men.
Upcoming Studies using ARIC Baecke Questionnaire

- Exploring how neighborhood environments might be associated with physical activity
- Exploring whether change in television watching over 6 years is associated with subsequent changes in physical activity or certain dietary patterns
- Exploring whether physical activity is associated with a reduced risk of TIA (transient ischemic attack)
Baecke Questionnaire

- Originally developed in the Netherlands on 132 men and women 20-32 years of age
- 5 components:
  » sport, leisure excluding sport, occupational, movement, and sleep
- Factor analysis reduced the questionnaire to 3 components:
  » sport, leisure excluding sport, occupational
- Published in 1982; at the time one of the few activity questionnaires that included women in the development
- Test-retest reliability was good; no validity reported
Baecke Questionnaire
Reliability and Validity

- 17 studies to date exploring reliability and validity of the questionnaire
- Test-retest reliability
  » If given in a standardized format, test-retest reliability is quite good
  » Not formerly tested among ARIC participants
- Validity
  » challenge is that there is not one gold standard criterion to compare this against
  » show to be correlated with other measures of physical activity
ARIC-Baecke Questionnaire

- ARIC: interviewers administered Baecke at visits 1 and 3
- Changes from the original:
  - open ended items on time spent in exercise was changed to categories
  - coding of activities based on an activity dictionary, which the original questionnaire did not use
  - repeat of sports activities limited to 4
Scoring of Baecke Questionnaire: Work Score

- **Work**
  - score ranges from 1 (low) to 5 (high)
  - 7 items plus coding of occupation (not in this section)
    - sitting at work (if does no work then you skip to #8)
    - standing at work
    - walking at work
    - lifting heavy loads at work
    - physically tired after work
    - sweating at work
  - Remember that this is a result of work activity and not due to the weather or temperature
  - comparison of your work to others (subjective)
Scoring of Baecke Questionnaire: Sport Score

- Sport
  - score ranges from 1 (low) to 5 (high)
  - 4 questions with parts
    - Do you exercise or play sports? (if no, skip to #26)
      - Type of activity (starting with most frequent)
      - Hours per week
      - Months per year
      - (Repeated for up to 4 activities)
    - Time playing sports or exercise
    - Activity compared to others (subjective)
    - Sweating during leisure time
      - Remember that this is a result of sport activity and not due to the weather or temperature
Scoring of Baecke Questionnaire: Leisure Score

- **Leisure**
  - score ranges from 1 (low) to 5 (high)
  - 4 items:
    - Watch television during leisure
    - Walking during leisure
      - may have been counted earlier
    - Bicycling during leisure
      - may have been counted earlier
    - Time spent walking or bicycling for transportation
      - do not include time spent walking at work, or walking/bicycling for exercise
Other Questions on Form

- Flights of stairs climbed up each day
  - one flight = 10 steps (may need to translate their response to this metric)
  - include ALL stair climbing (work, home, leisure), but does not include climbing ladders
- Any heavy physical work in the past 12 hours
  - if yes, how many hours/minutes ago
- Any vigorous exercise or sports in the past 12 hours
  - if yes, how many hours/minutes ago
Administering the Questionnaire (1)

- Computer monitor is turned to face participant so that they can see the pop-up windows
- If cannot perform using computer, then should show participant the response notebook and record answers on paper
- Greet participant kindly by name
  » This will confirm that you have the correct person
Administering the Questionnaire (2)

- Explain that the purpose of this interview is to obtain information on physical activity (work, sport, and leisure) in the past year.
- Once the interview begins:
  - Show the pop-up screen to the respondent.
  - Read aloud the response categories the first time they are shown; reread only if respondent says they need assistance.
- Clinic staff receptionist should alert interviewer if participant has any problems reading.
  - If there are problems with reading, the interviewer must read aloud the pop-up window responses.
Administering the Questionnaire (3)

- Coding of sports:
  - If sport or exercise is not listed, then type it in as an open-ended response and record the code #499
  - Please be familiar with the code list so #499 is used sparingly
  - There is no pop-up for this list
  - This list should not be shown to participants, because we don't want to prompt recall of PA
  - Probe if necessary to clarify the type of PA - must do this during the interview or important information will be lost
    - Examples:
      - Golf: ask if using cart or walking/carrying clubs
      - Jogging: ask if <6 or >=6 mph
      - Swimming: breast stroke, butterfly, crawl, etc.
Administering the Questionnaire (4)

Probing:

» If hours reported doing sports seems excessive, please repeat to the participant to be certain (#10, 14, 18, 22).