

Chapter 10

Physical Function and Activity

INTRODUCTION

The questions asked for Visit 3 will be the same as those asked during the baseline examination (Visit 1) and Visit 2 so that the three examinations will be comparable and so it will be possible to calculate changes in the responses across the assessments. Note: At Visit 2 we harmonized some responses with the Framingham Heart Study (FHS) data. See Chapter 10, Visit 2 MOP for analytic details. This information is not relevant for Research Staff conducting visits, this is for analysis purposes only.

BACKGROUND AND PURPOSE

This panel assesses the participant's perception of his/her ability to carry out activities of daily living. It asks about the participant's current social capabilities as well as the ease with which specific activities can be completed. It also asks about changes in frequency of engaging in the activity as well as changes in the way in which the activity is carried out.

ADMINISTRATION

This form can be either administered by the study staff at the in-person examination, distributed to the participant at the in-person examination and completed on their own, or mailed to those not seen in person. If self-administered, participants will be asked to carefully complete the survey and return it to the appropriate Field Center in the supplied self-addressed, stamped envelope. Upon receiving the completed survey, study staff will review the document for accuracy, and if needed, will contact the participant by telephone for clarification.

DEFINITIONS

Physical Function:

Difficulty in performing tasks - Performing the task requires more than a minimal amount of effort, or causes symptoms such as shortness of breath, emotional stress, etc.

Activities:

1. Getting out of a bed or chair, rising from a sitting or lying position to a standing position or transferring from bed to chair.
2. Bathing - Getting water, soap, towel and other necessary items and washing oneself.
3. Walking around your home - Walking from room to room or within one room of the person's principal residence.
4. Walking one quarter of a mile and one mile - Participant walks this distance without stopping for more than five minutes.
5. Walking up 10 steps and 20 steps - Ascending from one story of a building to another without stopping for more than one minute.

Physical Activity: Movement produced by skeletal muscles which results in energy expenditure.

METHODS

Social Capabilities: Questions 1 and 2 attempt to measure the participant's ability to socialize *with people outside of one's home/living facility*. Contact with family members who live with the participant do not count as social interaction nor do daily interactions with staff/other residents in a nursing home or other assisted living-type facilities. However, arranged 'visits', 'get-togethers', 'social events', etc. would count as social activities in that these 'events' go above and beyond normal, daily and unarranged contact with people. The participant will choose the best response which most closely estimates how often s/he interacts with others and how often s/he spends an entire day alone in a typical week. A typical week is one in which no unusual activities/obligations have occurred. Please use the Response Form in **Appendix B** for Question 1.

Physical Function: Questions 3-9 involve the participant's current functional status. Please note the skip patterns on this form. For questions 3a to 9a, participants should check the appropriate box to indicate whether s/he has difficulty completing the specified task.

For questions 3b, 4b, 5b, etc., participants should check the appropriate box to indicate how much difficulty [he/she] experiences when getting in/out of bed or chairs, bathing or showering, walking across a small room, etc. Please use the Response Form provided in **Appendix B** for Q3b, 4b, 5b, 6b and 8b.

For example, if a participant responds to Q3a (difficulty rising from bed/chair) as "Yes", [he/she] should then proceed to answer Q3b. If the participant selects any other category other than "yes" [he/she] will skip Q3b and Q3c and proceed directly to Q4a, for Q3 and to Q5a for Q4.

If "No" to Q3a, then the person should skip to Q4a. If "No" to Q4a, skip to Q5a, if "No" to Q5a, skip to Q6a. If "No" to Q6a, then the person should skip to Q6d. The same pattern holds for Q8a, which skips to Q8d.

For Q3c-6c and 8c, indicate whether or not the participant receives help to complete the specified task. Please note skip patterns.

Vision and Hearing: The focus of Questions 10 and 11 is to assess the participant's ability to see and hear. The participant will reply with either Yes or No for whether [he/she] wears glasses/contact lenses (Q10a) or hearing aid (Q11a). The participant is then asked to rate his/her vision (Q10a) with corrective lenses if worn and hearing (Q11b) with hearing device if used by circling one of the 5 available categories ranging from Excellent Vision or Hearing to Very Poor.

Activity Participation: Questions 12a-b assess the participant's current participation in activities over the past two weeks. The respondent is first asked to indicate whether s/he has walked outside the home in the past two weeks by choosing Yes or No. If the participant selects "Yes", s/he will proceed to Q12b to indicate the number of days s/he walked in the past two weeks by selecting one of the categories and then proceed to **next question, Q13**. If the participant selects "No", s/he will skip to Q12c to indicate why s/he did not do any walking in the past two weeks. If neither category is applicable, the respondent may check "Other" and specify the reason.

Questions 13a&13b and Q14a&14b: These are completed for all NEW participants only. These questions ask about physical activity and exercise habits at around age 50. NOTE: If the participant's current age is

<50 they should answer for their current age.

Typical Day Rest and Activity for a typical day: Questions 15-19 assess the participant's current level of rest and activity over the course of a typical day during the past year. First explain that the first section is rest and activity for a typical day (24 hours). The day is broken up into different types of activities and a typical day is considered MOST days of the week. Read through each activity and do NOT clarify. Explain that a total number of hours for a typical day must equal 24 hours. This should capture over the past year. Make adjustments according to the participant until the total number of hours equals 24.

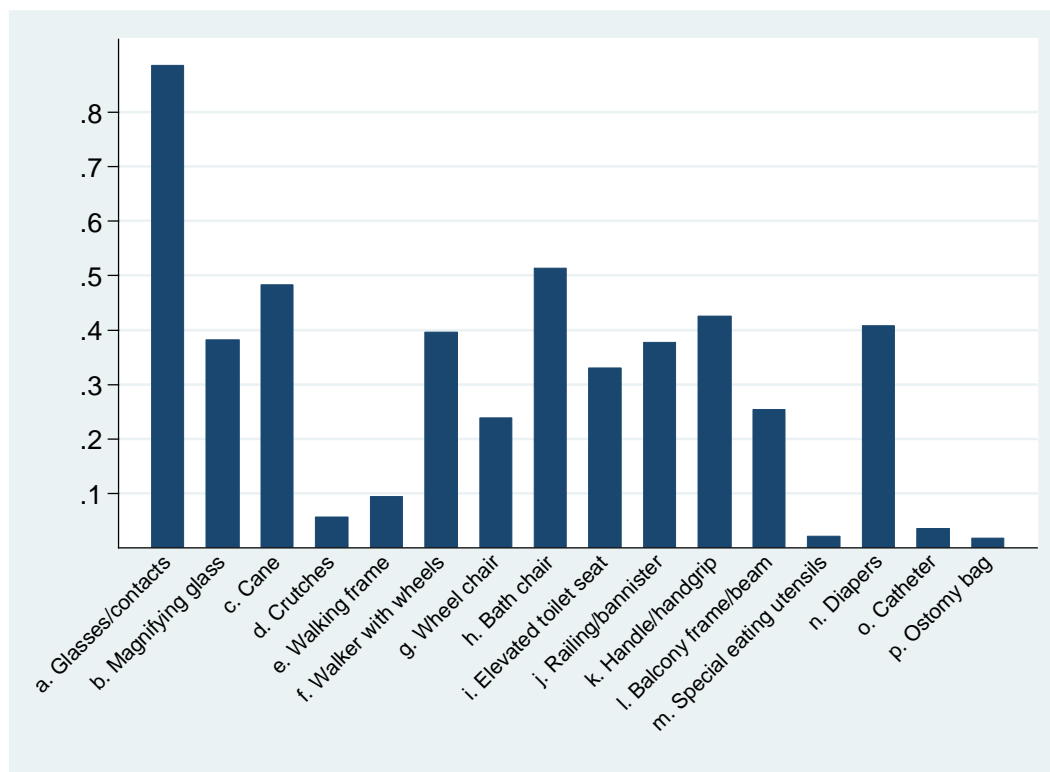
The five activity levels are: time sleeping, time in sedentary activity (sitting), time in slight activity (walking/standing), time in moderate activity (housework), and time in heavy activity (heavy housework, heavy yard work, intensive sports). The sum of these 5 questions must total 24. This is adapted from the Framingham Heart Study questionnaire to allow for harmonization of activity levels between our studies.

Assistive devices: Especially elderly people may be using a lot of different aids to cope with their daily life. For **Q20** ask the participant whether s/he is currently using some of the aids/assistive devices on the list beginning with: hearing aid, glasses/contact lenses, cane etc. Mark each item used with a YES and move to the next item.

Assistive devices in the Danish 1905-Cohort – ages 92-93

Ordinarily, do you use any of the following aids?	Yes	No
a. Glasses/contact lenses	1996 (88.6)	257 (11.4)
b. Magnifying glass	861 (38.2)	1391 (61.8)
c. Cane	1088 (48.3)	1163 (51.7)
d. Crutches	127 (5.6)	2123 (94.4)
e. Walking frame	200 (9.4)	1926 (90.6)
f. Walker with wheels (rollator)	891 (39.6)	1360 (60.4)
g. Wheel chair	537 (23.8)	1715 (76.2)
h. Bath chair	1147 (51.3)	1089 (48.7)
i. Elevated toilet seat	742 (33.1)	1502 (66.9)
j. Railing/bannister	845 (37.7)	1395 (62.3)
k. Handle/handgrip	953 (42.5)	1290 (57.5)
l. Balcony frame/beam	571 (25.4)	1675 (74.6)
m. Special eating utensils	48 (2.1)	2202 (97.9)
n. Diapers	912 (40.7)	1327 (59.3)
o. Catheter	73 (3.6)	1977 (96.4)
p. Ostomy bag	36 (1.8)	2013 (98.2)

Graph of the table



Fatigability: The concept of fatigability classifies fatigue in relation to a defined activity of a specific intensity and duration. This conceptualization offers a potentially less biased, more objective approach to measuring the degree to which someone is limited physically due to fatigue. This is especially important in studies of older adults, who in an effort to reduce or avoid fatigue, may modify their exertion level (e.g., slow down and/or shorten task duration) to maintain a tolerable effort, i.e., engage in self-pacing. The 10-item Pittsburgh Fatigability Scale (Glynn et al 2014) is a valid and reliable measure of perceived fatigability in older adults. In the validation sample, total PFS physical fatigability_score was closely associated with reported exertion at the end of a standard task as well as with measures of walking performance. Importantly, PFS score was strongly associated with a validated performance-based measure of physical fitness, the 400m component of the long distance corridor walk. The PFS has been designed and validated to serve as an adjunct to performance-based fatigability measures for identifying older adults at risk of mobility limitation in clinical and research settings. The PFS has been administered since Visit 2, and during all Annual Follow-ups since June 2018. For Visit 2, the form was self-administered, and it is completed over the telephone during annual follow-up. The same procedures will be used for Visit 3 annual follow ups.

Administration Instructions for the form: For Visit 3, this form will be mailed as part of Panel 3 prior to the in person examination and checked for completeness by the Research staff. It is very important that all questions are answered in all 3 columns. This form cannot be completed by proxy.

Note: If the participant is having a hard time guessing, please encourage them to make their best guess. As a guide if participants have trouble understanding **mental fatigability**, it should be defined as self-report cognitive tiredness related to activities of fixed intensity and duration; similarly, **physical fatigability** is self-report whole-body tiredness related activities of fixed intensity and duration.

Instructions on the form for participants: The following questions ask you to indicate the level of **physical** and **mental** fatigue (i.e. tiredness, exhaustion) you expect or imagine you would feel immediately after completing each of the ten listed activities.

For each activity (a-j) please circle responses for both physical and mental fatigue between 0 and 5, where "0" equals no fatigue at all and "5" equals extreme fatigue.

In the last column indicate if you have done the activity in the past month. If you answer “No”, please make your best guess for the fatigue questions (see Example 2 below). **Please fill out all three columns for every activity even for those that you do not do.** Also pay careful attention to the duration (e.g., 30 minutes) and intensity (e.g., moderate, brisk) of each activity.

Item by item questions (21-30 on panel)

21. Leisurely walk for 30 minutes.
22. Brisk or fast walk for 1 hour.
23. Light household activity for 1 hour (cleaning, cooking, dusting, straightening up, baking, making beds, dishwashing, watering plants).
24. Heavy gardening or yard work for 1 hour (moving (push), raking, weeding, planting, shoveling snow).
25. Watching TV for 1 hour.
26. Sitting quietly for 1 hour.
27. Moderate to high-intensity strength training for 30 minutes (hand-held weights or machines greater than 5 lbs., push-ups).
28. Participating in a social activity for 1 hour (party, dinner, senior center, gathering with family/friends, playing cards).
29. Hosting a social event for 1 hour (not including preparation time)
30. High-intensity activity for 30 minutes (jogging, hiking, biking, swimming, racquet sports, aerobic machines, dancing, Zumba).

Pittsburgh Fatigability Scale Scoring Instructions (Note: The PFS is scored by the Coordinating Center)

Physical Fatigability Score: Calculated by summing the physical fatigue rating for each activity (a-j). Score range (0-50) with higher score=greater physical fatigability.

Mental Fatigability Score: Calculated by summing the mental fatigue rating for each activity (a-j). Score range (0-50) with higher score=greater mental fatigability.

EQUIPMENT

Panel 19: Health Habits Questionnaire: New Participants Only (Including Grandchildren)

Administration of the Health Habits Questionnaire:

Detailed Q-by-Q:Questions 1-4 Historical Physical Activity:

These pertain to assessing historical physical activity levels during teenage years, around age 25, age 50 and over the past month. Please read the 5 response options and ask the participant to choose the option that is most suitable. Encourage them to make their best guess, but if they are unable to provide an answer mark “Don’t Know”. For those that have not reached age 50, the appropriate answer for Question 3 is “Not Applicable”. Note that the terms exercise and physical activity can be used interchangeably for these questions. Examples of light activities for response Option 2 or 3 include dusting, doing dishes, leisurely walk, watering plants. Options 4 and 5 are for moderate intensity activities such as a brisk walk, bowling, golf, vacuuming, washing car. Response answer #6 should be marked when participants state that they are performing high intensity activities such as jogging, running, hiking, biking, swimming laps, racquet sports, aerobic machines or dancing, Zumba, shoveling snow, gardening (planting, weeding). If a participant answers that they do not sweat, then ask them to rate their intensity level for their activities as low, moderate or high intensity.

Questions 5 – 23J Sleep Habit Questionnaire:

Please see next page for detailed Q-by-Q from the Sleep Heart Health Study Manual of Procedures. Note that the SHHS does not specify a time period, just states “usually”. So, in order to maintain the integrity of the established questionnaire, the wording will be maintained and we will not define a time period.

Reference for Sleep Heart Health Sleep Habits Questionnaire: <http://www.jhucct.com/shhs/>

Sleep Habits and Lifestyle Questionnaire (SH) Form**Question by Question Specifications****Section A: Sleep**

1. How much sleep do you usually get at night (or in your main sleep period) on weekdays or workdays?
2. How much sleep do you usually get at night (or in your main sleep period) on weekends or your non-workdays?

Clarification for questions 1 and 2:

- If an individual has a job, they should report the usual amount of sleep they get on their work days for question 1 and for their non-work days for question 2.
- If an individual does not work, then the individual should report the usual time for weekdays (Monday through Friday) for question 1 and the usual time for weekends (Saturday and Sunday) for question 2.

3. How long does it usually take you to fall asleep at bedtime?
 - If a range is given, take the midpoint. If midpoint is a fraction of a minute, the midpoint should be rounded up to nearest minute.
 - Example: 10-20 minutes should be written as 15 minutes
 - 10-15 minutes should be written as 13 minutes
 - If two times are given, a usual time and a special circumstances time, code the usual time
 - Example: “Usually it takes 10 minutes but if my spouse is snoring it takes 30 minutes.” Code as 10 minutes.

4. During a usual week, how many times do you nap for 5 minutes or more?
 - If a range is given, take the midpoint. If midpoint is a fraction, round to nearest integer value.
 - Example: 6 or 7 naps should be coded as 7 (6.5 rounded up to 7)
 - 10 to 12 naps should be coded as 11 naps
 - If respondent describes napping pattern in words, convert to an integer value, if possible.
 - Example: “I usually fall asleep in front of the TV after dinner.” Code as 7 naps per week.
 - If response is “None”, SKIP to item 8.
 - If response, is “1 or more times”, complete item 4a.
- 4a. Number of times during a usual week that you nap for 5 minutes or more:
 - Enter number of naps.
5. Do you try to “make time” in your schedule for a regular nap or “siesta” in the afternoon? (check one)
 - Check only one response.
 - If response is “Never or rarely”, SKIP to item 8.
6. When you do nap in the afternoon, how long do you sleep?
 - Enter hours and minutes.
 - There is a space for comments.
 - What are your reasons for regular napping in the afternoon?
 - All that apply are checked and others left blank.
7. Please indicate how often you experience each of the following. (check one box for each in items a through j)
 - If someone writes in a comment such as “Not Applicable”, code for the response “Never”.
 - If two boxes have been marked and it is not clear which is the intended single response, code the value marked that is closest to the response “Rarely”.

Section B: Snoring and Breathing

Questions 9 through 15 are about snoring and breathing during sleep. To answer these questions, participants should consider both what others have told them and what they know about themselves.

8. Have you ever snored (now or at any time in the past)?

Clarification:

- “Ever” refers to 1 or more times at any time in the past, regardless of whether it was recent.
 - If answer is “Yes”, then participant should have answers coded for questions 10 - 13.
 - If answer is “No” or “Don’t Know”, then participant should have skipped out of questions 10 - 13, however:
 - If “Don’t Know” responses are given for any of questions 10 - 12, or a response of “No” is given for question 13, enter data as given on the form.
- If a valid response is given for any of questions 10 through 13, then the “No,” “Don’t Know,” or missing response on question 9 is to be changed to a “Yes” on the questionnaire and entered into the database as “Yes.” Valid responses are defined as

Q10: values 0 to 4; Q11: values 1 to 4; Q12: 1 to 3, and Q13: only the value of 1.

- If answer is missing, and a valid response is given for any of questions 10 through 13, then the missing

response on question 9 is to be changed to a “Yes” on the questionnaire and entered into the database as “Yes.”

9. How often do you snore? (check one)

Clarification:

- “How often” refers to the number of nights per week that any snoring is thought to occur. (Not how many times per night or how much of the night).
- If “Do not snore any more” is checked, SKIP to item 13.
- If two boxes have been marked and it is not clear which is the intended single response, code the value marked that is closest to “Rarely”.

10. How loud is your snoring? (check one)

- If two boxes have been marked and it is not clear which is the intended single response, code the value marked that is closest to “Only slightly louder than normal breathing”.

11. Has your snoring been: (check one) Clarification:

- In comparison to a few years ago, do you think you now snore more, less or about the same?
- If two boxes have been marked, treat as missing data.

12. Have you ever had somnoplasty, laser treatment, or surgery as treatment for your snoring?

Clarification:

- Has a physician ever used a laser to tighten your throat tissue (“LAUP”), or have you ever had tissue in your throat or airway removed by cutting, specifically to reduce your snoring?

13. Are there times when you stop breathing during your sleep?

Clarification:

- Are there times when it seems like you are holding your breath or have a pause in your breathing, or have an “apnea” for about 10 seconds or so?
- If “No” or “Don’t know” is checked, SKIP to item 16.

14. How often do you have times when you stop breathing during your sleep?

Clarification:

- How often do you have times when it seems like you are holding your breath or have a pause in your breathing, or have an “apnea” for about 10 seconds or so?
- If two boxes have been marked and it is not clear which is the intended single response, code the value marked that is closest to “Rarely”.

15. During the past year, how often have one or more members of your household been in or near the room where you have slept?

Clarification:

- Close enough to hear whether or not participant snores.

16. Have you ever been told by a doctor that have a sleep disorder (other than sleep apnea)?

- Check “Yes” or “No”
- If response is “No”, SKIP to item 19.

17. What other sleep disorder? (check all that apply)

- Check all that apply.
- If response is “Other”, enter other sleep disorder in space provided.

Section C: Sleepiness

19. What is the chance that you would doze off or fall asleep (not just “feel tired”) in each of the following situations? (*Check one box for each situation. If you are never or rarely in the situation, please give your best guess for what would happen.*)

Clarification:

- If the participant never does the activity in the question, prompt “Try to imagine (activity) what do you think the chance of dozing or falling asleep would be on a usual day if you did (activity)?
- If someone writes in a comment such as “Not Applicable” treat as missing data.
- If two boxes have been marked and it is not clear which is the intended single response, code the value marked that is closest “No Chance”.

IADL Scale: Panel 20 Questions **P1-P8** should be completed as part of a full assessment of instrumental activities of daily living. This panel will be sent to all participants (new and returning) via mail for completion prior to the in person visit. Field staff at the visit will be responsible for checking for answer completeness and if missing responses, ask participants at the in person visit to make their best guess. This form can be completed by a Proxy.

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Materials Associated with the Chapter:

Panel 3: Physical Function and Activity

Panel 19: Health Habits Questionnaire

Panel 20: IADL Scale