PHYSICAL EXAMINATION

1 Background and Rationale

The CHS physical examination form was adapted from the form used in SHEP. The baseline physical examination takes place during the initial clinic visit and is repeated during the third year visit. The form is designed to obtain minimal information about the physical condition of the participant and should also help develop rapport with participants who could be put off by an examination that is all historical and tests.

The physical examination data will be used to detect preclinical disease such as carotid bruits and obtain a neurological baseline against which to gauge new clinical events, e.g., strokes or vascular dementia. Changes in the examination over time may also be used as an endpoint such as the presence of bruit on the second examination that were not present on the first examination.

2 Definitions

2.1 Equipment

- Well-lighted, draft-free room with air temperature adjusted so that the participant is comfortable
- Stethoscope with bell
- 15 Foot tape
- Dynamometer
- Straight backed chair (standard for all Field Centers)
- 2 Stop watches or 1 stop watch and 1 wall clock with second hand

2.2 Preparation

Participant should disrobe and dress in the CHS examination suit leaving on only undershorts/panties, and socks.

2.3

All findings reported on this examination form are in reference to the participant's **right or left side.**

3 Methods

3.1 Item 1 - Fifteen Foot Walk

- Item 1a - Is the participant able to walk 15 feet?
  - Code "Y - Yes" when the participant is able to perform the 15 foot walk.
  - Code "N - Not able" when the participant was not physically capable of walking. This includes a participant who is bed or wheelchair bound.

NOTE:
1) When the participant indicates that they are unsure whether they are able to do the walk, do not ask them to perform the walk.

2) When the clinician is concerned over the participant's stability or ability to perform the walk, s/he should ask for an **assistant** to walk beside the participant.

- Code "A - Not assessed" when the participant refused to do the walk or for some reason the walk was not performed other than that codable under "N - Not able".

■ Instructions for conducting the measured walk:

- Demonstrate the walk for the participant.
- The participant stands with both feet together at one end of the rule.
- With the participant properly positioned at starting line say "Ready, Begin".
- Start the stopwatch as the participant begins walking; stop the stopwatch when the first of the participant's feet is completely across the finish line.

■ Item 1b - Time in seconds to walk 15 feet

- Record the number of seconds it took the participant to walk the 15 foot course.

3.2 Items 2 to 13 Grip Strength

3.2.1 This examination is used to test how strong the participant's hands are.

3.2.2 Participants with one or more of the following conditions should not be tested:

- Acute flare-up of wrist/hand, for example arthritis or tendinitis.
- Less than 13 weeks post fusion, arthroplasty, tendon repair or synovectomy of the upper extremity.

■ Introductory Script: In this exercise I am going to use this instrument to test the strength in your hands. Have you had a recent worsening of pain or arthritis in your wrist, or do you have tendinitis?

- Code "Y - Yes" when the participant has had a worsening of pain in either

hand or wrist, or has tendinitis.

- Code "N - No" when the participant has not had a worsening of pain in either hand or wrist, or has tendinitis.

Script: Have you had any surgery on your hands or arms during the last 13 weeks?

- Code "Y - Yes" when the participant has had surgery on either hand or wrist during the last 13 weeks.

- Code "N - No" when the participant has not had surgery on either hand or wrist during the last 13 weeks.

■ When either of the safety items above are coded "Y - Yes", do not test grip strength.

■ When either of the safety items above are coded "Y - Yes", skip to Item 14.

Introductory Script: I'd like you to take the arm that you think is stronger, place your elbow on the table and grab the two pieces of metal together like this (examiner demonstrates). When I say squeeze, squeeze as hard as you can. The two pieces of metal will not move but I will be able to read the force of your grip on the dial.

I will ask you to do this three times. When you feel any pain or discomfort, tell me and we will stop.

O.K. Now you try.

■ Examination is done with the participant in the sitting position with the arm to be tested resting at a right angle on a table.

■ Examiner demonstrates the maneuver for the participant.

■ Stand behind participant and hold dynamometer steady.

3.2.3 Items 4 and 9 - Hand

■ Code which hand is being tested.

■ Begin with the dominant hand.

■ Code "R - Right" when the right hand is being tested.

■ Code "L - Left" when the left hand is being tested.

- Code "U - Unable/discontinued" when the participant was unable to complete the examination due to pain or discomfort.

- Code "A - Not Assessed" when the participant refused to perform the test.

- Repeat the examination three times in the dominant hand, then switch the dynamometer to the non-dominant hand and test grip strength three times.

3.2.4 Items 5 and 10 - Position of Dynamometer

The position of the Dynamometer must be set to "2" for testing of all participants. The computer default for this item is "2".

3.2.5 Items 6 to 8 and 11 to 13 Strength in Kilograms

- Set the dynamometer to zero prior to each attempt.

- Record the strength for each attempt in kilograms. Round down to the nearest kilogram.

- A minimum of two attempts per hand must be made.

- Record "00.0" when the third attempt was not made.

3.3 General Physical Examination

The general and neurologic physical examinations are done with the participant seated in a chair.

3.4 Item 14 - Chest, Lungs

Examine bilateral lung bases on the posterior chest with the participant in the sitting position.

- When bilateral rales that do not clear with coughing are not identified, code Item 14 "N - No".

- When bilateral rales that do not clear with coughing are identified, code Item 14 "Y - Yes".

- Code "D - Don't know", when it cannot be determined whether the participant has bilateral rales.

3.5 Items 15 and 16 - Heart

Listen over the right and left second intercostal space at the sternal border.

- When the participant has a systolic murmur:
  - Code Item 15 "Y - Yes", and
  - Code Item 16 "N - No"
- When the participant has a diastolic murmur:
  - Code Item 15 "N - No" and
  - Code Item 16 "Y - Yes"
- Code "D - Don't Know", when it cannot be determined whether the participant has a murmur.

3.6 Items 17 and 18 - Carotid Bruits

- Examine the participant's neck to determine presence or absence of systolic carotid bruits. Examination procedure is as follows:
  - Ask the participant to hold his/her breath for 3-5 seconds during each auscultation.
  - Listen with bell in supraclavicular fossa.
  - Listen with bell over the carotid artery at the angle of the jaw.
- When neither a right or left carotid bruit is identified, code "N - No" for Items 17 and 18.
- Item 17a - Right Supraclavicular Fossa
  - Code Item 17a "Y - Yes" when the participant has a right carotid bruit, heard in the supraclavicular fossa.
  - Code Item 17a "N - No" when the participant does not have a right carotid bruit heard in the supraclavicular fossa.
  - Code "D - Don't Know", when it cannot be determined whether the participant has a right carotid bruit.
- Item 17b - Right Angle of the Jaw
  - Code Item 17b "Y - Yes" when the participant has a right carotid bruit, heard at the angle of the jaw.

- Code Item 17b "N - No" when the participant does not have a right carotid bruit heard at the angle of the jaw.

- Code "D - Don't Know", when it cannot be determined whether the participant has a right carotid bruit.

■ Item 17c - Intensity

When both Item 17a and 17b are coded "Y - Yes" code the right carotid bruit intensity using the following codes:

- Code Item 17c "S - Supraclavicular fossa louder" when the right carotid bruit is heard loudest in the supraclavicular fossa.

- Code Item 17c "J - Angle of jaw louder" when the right carotid bruit is heard loudest at the angle of the jaw.

- Code Item 17c "E - Equal intensity" when the right carotid bruit is heard equally in the supraclavicular fossa and at the angle of the jaw.

■ Item 18a - Left Supraclavicular Fossa

- Code Item 18a "Y - Yes" when the participant has a left carotid bruit, heard in the supraclavicular fossa.

- Code Item 18a "N - No" when the participant does not have a left carotid bruit heard in the supraclavicular fossa.

- Code "D - Don't Know", when it cannot be determined whether the participant has a left carotid bruit.

■ Item 18b - Left Angle of the Jaw

- Code Item 18b "Y - Yes" when the participant has a left carotid bruit, heard at the angle of the jaw.

- Code Item 18b "N - No" when the participant does not have a left carotid bruit heard at the angle of the jaw.

- Code "D - Don't Know", when it cannot be determined whether the participant has a left carotid bruit.

■ Item 18c - Intensity

When both Item 18a and 18b are coded "Y - Yes" code the bruit intensity using

the following codes:

- Code Item 18c "S - Supraclavicular fossa louder" when the left carotid bruit is heard loudest in the supraclavicular fossa.

- Code Item 18c "J - Angle of jaw louder" when the left carotid bruit is heard loudest at the angle of the jaw.

- Code Item 18c "E - Equal intensity" when the left carotid bruit is heard equally in the supraclavicular fossa and at the angle of the jaw.

3.7 Item 19 - Extremities

Record the presence or absence of pitting ankle edema, measured 2 finger breadths above the medial malleolus.

- Code Item 19 "N - No" when the participant does not have pitting ankle edema,

- Code Item 19 "Y - Yes" when the participant has pitting ankle edema.

- When the pitting edema is unilateral, make note in comment section.

- Code "D - Don't Know", when it cannot be determined whether the participant has pitting ankle edema.

- When the pitting edema is unilateral, make note in comment section.

3.8 Items 20 to 24 - Single Chair Stand

3.8.1 Item 20 - Safety

- Item 20 Do you think it would be safe for you to try to stand up from a chair without using your arms?

  - Code "Y - Yes" when the participant indicates it would be safe for them to perform the task.

  - Code "N - No" when the participant indicates it would be unsafe for them to perform the task.

3.8.2 Item 21 Do you think you could try to stand up from a chair without using your arms?

- Code "Y - Yes" when the participant indicates s/he would be able to perform the task.

- Code "N - No" when the participant indicates s/he would not be able to perform the task.

■ Item 22 When either of the safety items above are answered "N - No", participant should not attempt the task. Code the reason the task was not performed using the following codes.

- Code "S - Not attempted, safety reasons" when the participant stated it was unsafe for them to attempt the task.
- Code "C - Not attempted, chair bound" when the participant was unable to stand without assistance.
- Code "O - Not attempted, other, specify" when the participant was unable to stand for a reason not coded above.
- When the participant did not attempt the single chair stand, skip to Item 32.

■ Item 23 - Number of attempts to rise.

- Attempts to rise include rocking and weight shifting.
- Code the number of attempts the participant made to rise from the chair.

■ Item 24 - Rises

- Code "1 - Rises without using arms" when the participant was able to rise from the chair without using his/her arms for assistance.
- Code "2 - Rises using arms" when the participant was unable to rise from the chair without using his/her arms for assistance, but was able to accomplish the task when arms were used.
- Code "3 - Attempted, but unable" when the participant made 5 attempts to rise, both with and without using arms, but was unable to accomplish the task.

3.9 Items 25 to 31 - Repeated Chair Stands

3.9.1 Item 25 - Safety

■ Item 25 Do you think it would be safe for you to try to stand up from a chair without using your arms, five times quickly?

- Code "Y - Yes" when the participant indicates it would be safe for them to perform the task.

- Code "N - No" when the participant indicates it would be unsafe for them to perform the task.

■ Item 26 - Reason task not attempted

- Code "S - Not attempted, safety reasons" when the participant stated it was unsafe for them to attempt the task.

- Code "C - Not attempted, chair bound" when the participant was unable to stand without assistance.

- Code "O - Not attempted, other, specify" when the participant was unable to stand for a reason not coded above.

3.9.2 Item 27 - Heart Rate (30 Second) Prior to Chair Stand

- Measure the heart rate for 30 seconds prior to asking the participant to begin the chair stands. For details regarding heart rate measurement see Baseline Random Zero Seated Blood Pressure and Heart Rate Measurement.

- Record the heart rate.

3.9.3 Introductory script: Please fold your arms across your chest and sit so that your feet are on the floor. Then, try to stand up without using your arms.

- Place the back of the chair against the wall to steady it.

- Stand next to the participant to provide assistance when participant loses his/her balance.

- When participant is unable to rise without using arms:

  Script: O.K., try to stand up using your arms to push-off.

3.9.4 Item 28 - Number Completed Chair Rises

- Code the number of successful chair rises (Maximum = 5).

- When the participant attempted to perform the test, but was unable to complete any rises, code Item 28 "0 - Attempted but not able".

3.9.5 Item 29 Heart Rate Immediately After Stopping

- Measure the heart rate for 30 seconds immediately following completion of the chair stands.
- Record the heart rate.

■ Item 30 - Number of seconds

- Code the number of seconds (Maximum = 60) required for the participant to perform the five chair rises.
- Do not record number of seconds unless the participant completed all 5 chair rises.

■ Item 31 - Chair height

The standard chair height from floor to top of chair seat is 45 cm. This measurement will be entered automatically by the computer.

3.10 Item 32 - Other Physical Findings/Comments

This section is used to record:

- Details of any abnormalities identified above,
- Abnormal or unusual physical or neurological findings not categorized above (e.g., comments on general appearance).
- Comments regarding the physical examination.

■ Code "N - No" when no narrative description is required.

■ Code "Y - Yes" when a narrative description will be entered.