



The BIOCARD Study

Biomarkers of Cognitive Decline Among Normal
Individuals

**Physical Functioning
Limited Dataset**

Glossary of Terms

Term	Description
Allowable Codes	codes (and their meanings) allowed to be values for that variable
Audit Findings	error rates based on BIOCARD or NIH phase audits error rates are calculated as number of errors / total number of variables examined
Baseline visit	date admitted to NIH phase of BIOCARD study <i>[Note: some data may have been collected prior to this date]</i>
Collection	when the variable information was collected (i.e., Baseline, Follow-up)
Comments	further information about the variable not covered in the above fields
Data Type	numeric or character <i>[Note: Dates are numeric data]</i> numeric or character classifications are strictly related to how the data are stored and not how the data should be analyzed
JHU phase	the study phase at JHU from 2009 - present
Missing OK If	instances (such as skips) or reasons why a blank or missing value is acceptable
NA	not applicable for this variable
NIH / NIH phase	the study phase that was performed at the NIH from 1995-2005
Question Text	the question as it appears on the NACC or BIOCARD data collection forms
Short Description	a short explanation of what the variable means
Source	the name of the NACC form, BIOCARD form, or NIH dataset containing the variable information (or "DERIVED" if the variable was derived) and the variable question number located on the form or in the dataset, if applicable
Unknown Code	the codes for the "unknown", "don't know", or missing values for the variable
Variable Name	the name of the variable in the provided dataset <i>[Note: Variables will follow the NACC naming scheme as closely as possible]</i>

Acronyms and Definitions

AD	Alzheimer's Disease	JHU	The Johns Hopkins University
CDR	Clinical Dementia Rating	MCI	Mild Cognitive Impairment
CERAD	Consortium to Establish a Registry for Alzheimer's Disease	MMSE	Mini-Mental State Examination
CNS	Central Nervous System	NACC	National Alzheimer's Coordinating Center
CSF	Cerebrospinal Fluid	NIA	National Institute on Aging
CVD	Cardiovascular Disease	NINDS	National Institute of Neurological Disorders and Stroke
CVLT	California Verbal Learning Test	NPI-Q	Neuropsychiatric Inventory Questionnaire
FAQ	Functional Assessment Questionnaire	UPDRS	Unified Parkinson's Disease Rating Scale
FTD	Frontotemporal Degenerations	WAIS	Wechsler Adult Intelligence Scale
GDS	Geriatric Depression Scale	WMS	Wechsler Memory Scale

Physical Functioning Limited Dataset Characteristics

Number of variables: 31

Order of variables:

1) JHUANONID	Participant ID Anonymized by JHU
2) VISITNO	Chronological visit number
3) MOFROMBL	Months since baseline visits
4) CHAIR_STAND_SING	Single Chair Stand
5) CHAIR_STANDS_REP	Repeated Chair Stands
6) CHAIR_STANDS_REP_N	Chair Stands number completed
7) CHAIR_STANDS_FIVE_T	Semi Tandem Stand
8) SEMI_TANDEM_STAND	Semi Tandem Stand
9) SEMI_TANDEM_STAND_T	Semi-Tandem Stand Time
10) SIDE_BY_SIDE_STAND	Side-by-Side Stand
11) SIDE_BY_SIDE_STAND_T	Side-by-Side Stand Time
12) TANDEM_STAND_1	Tandem Stand (Trial 1)
13) TANDEM_STAND_1_T	Tandem Stand (Trial 1) Time
14) TANDEM_STAND_2	Tandem Stand (Trial 2)
15) TANDEM_STAND_2_T	Tandem Stand (Trial 2) Time
16) NORMAL_P_WALK_1	Normal Pace Walk (Trial 1)
17) NORMAL_P_WALK_1_T1	Normal Pace Walk (Trial 1) Time 1
18) NORMAL_P_WALK_1_T2	Normal Pace Walk (Trial 1) Time 2
19) NORMAL_P_WALK_2	Normal Pace Walk (Trial 2)
20) NORMAL_P_WALK_2_T1	Normal Pace Walk (Trial 2) Time1
21) NORMAL_P_WALK_2_T2	Normal Pace Walk (Trial 2) Time 2
22) ARTHRITIS_PAIN	Pain or arthritis in either hand or wrist
23) ARTHRITIS_PAIN_LOCATION	Location of pain or arthritis in hand or wrist
24) ARTHRITIS_PAIN_WORSE	Pain or arthritis in hand or wrist worse
25) ARTHRITIS_PAIN_SQUEEZING	Pain or arthritis in hand or wrist interferes with squeezing
26) SURGERY_HAND_WRIST_3MO	Surgery on hand or wrist in the past 3 months
27) SURGERY_LOCATION_HAND_WRIST	Location of surgery in hands or wrists
28) HAND_PREFERRED_STRENGTH	Preferred hand for maximum strength
29) GRIP_STRENGTH_1	Grip Strength (trial 1)
30) GRIP_STRENGTH_2	Grip Strength (trial 2)
31) GRIP_STRENGTH_COMPLETE	Grip Strength completion status

1)	Variable Name	JHUANONID
	Short Description	Participant ID Anonymized by JHU
	Source	NA
	Question Text	NA
	Time of Collection	Baseline
	Data Type	Character
	Allowable Codes	JHU + 6 numbers
	Missing OK If	NA
	Audit Findings	NA
	Comments	None

2)	Variable Name	VISITNO
	Short Description	Chronological visit number
	Source	Form B10-Physical Functioning
	Question Text	NA
	Time of Collection	Baseline and Follow-up
	Data Type	Numeric
	Allowable Codes	Integers from 101 to TBD
	Missing OK If	NA
	Audit Findings	No NIH or JHU audit
	Comments	None

3)	Variable Name	MOFROMBL
	Short Description	Months since baseline visit
	Source	DERIVED
	Question Text	NA
	Time of Collection	Baseline and Follow-up
	Data Type	Numeric
	Allowable Codes	Min = 0 Max = 999
	Missing OK If	NA
	Audit Findings	NA
	Comments	Calculated as months between the baseline start date and the recorded Physical functioning date.
4)	Variable Name	CHAIR_STAND_SING
	Short Description	Single Chair Stand
	Source	Form B10-PHYSICAL FUNCTIONING
	Question Text	Single Chair Stand?
	Time of Collection	Baseline and Follow-up
	Data Type	Char
	Allowable Codes	1=Participant refused 2=Not attempted, unable 3=Attempted, unable to stand 4=Rises using arms 5=Stands without using arms
	Missing OK If	NA
	Audit Findings	[JHU Audits]: B10 form error rate = 0.0% (based on 30 forms as of Dec2018)
	Comments	JHU phase only

5)	Variable Name	CHAIR_STANDS_REP
	Short Description	Repeated Chair Stands
	Source	Form B10-PHYSICAL FUNCTIONING
	Question Text	Repeated Chair Stands?
	Time of Collection	Baseline and Follow-up
	Data Type	Char
	Allowable Codes	1=Participant refused 2=Not attempted, unable 3=Attempted, unable to complete 5 stands 4=Completes 5 stands
	Missing OK If	NA
	Audit Findings	[JHU Audits]: B10 form error rate = 0.0% (based on 30 forms as of Dec2018)
	Comments	JHU phase only

6)	Variable Name	CHAIR_STANDS_REP_N
	Short Description	Chair Stands number completed
	Source	Form B10-PHYSICAL FUNCTIONING
	Question Text	Chair Stands number completed?
	Time of Collection	Baseline and Follow-up
	Data Type	Char
	Allowable Codes	0=0 1=1 2=2 3=3 4=4
	Missing OK If	NA
	Audit Findings	[JHU Audits]: B10 form error rate = 0.0% (based on 30 forms as of Dec2018)
	Comments	JHU phase only

7)	Variable Name	CHAIR_STANDS_FIVE_T
	Short Description	Time for 5 Chair Stands
	Source	Form B10-PHYSICAL FUNCTIONING
	Question Text	Time for 5 Chair Stands?
	Time of Collection	Baseline and Follow-up
	Data Type	Char
	Allowable Codes	01:00=MIN 99:99=MAX
	Missing OK If	NA
	Audit Findings	[JHU Audits]: B10 form error rate = 0.0% (based on 30 forms as of Dec2018)
	Comments	JHU phase only
8)	Variable Name	SEMI_TANDEM_STAND
	Short Description	Semi Tandem Stand
	Source	Form B10-PHYSICAL FUNCTIONING
	Question Text	Semi Tandem Stand?
	Time of Collection	Baseline and Follow-up
	Data Type	Char
	Allowable Codes	1=Participant refused 2=Not attempted, unable 3=Unable to attain position or hold for one second 4=Holds for >= but less than 10 seconds 5=Holds position for 10 seconds
	Missing OK If	NA
	Audit Findings	[JHU Audits]: B10 form error rate = 0.0% (based on 30 forms as of Dec2018)
	Comments	JHU phase only

9)	Variable Name	SEMI_TANDEM_STAND_T
	Short Description	Semi-Tandem Stand Time
	Source	Form B10-PHYSICAL FUNCTIONING
	Question Text	Semi-Tandem Stand Time?
	Time of Collection	Baseline and Follow-up
	Data Type	Char
	Allowable Codes	1:00=MIN 9:99=MAX
	Missing OK If	NA
	Audit Findings	[JHU Audits]: B10 form error rate = 0.0% (based on 30 forms as of Dec2018)
	Comments	JHU phase only

10)	Variable Name	SIDE_BY_SIDE_STAND
	Short Description	Side-by-Side Stand
	Source	Form B10-PHYSICAL FUNCTIONING
	Question Text	Side-by-Side Stand?
	Time of Collection	Baseline and Follow-up
	Data Type	Char
	Allowable Codes	1=Participant refused 2=Not attempted, unable 3=Unable to attain position or hold for one second 4=Holds for >=1 but less than 10 seconds 5=Holds position for 10 seconds
	Missing OK If	NA
	Audit Findings	[JHU Audits]: B10 form error rate = 0.0% (based on 30 forms as of Dec2018)
	Comments	JHU phase only

11)	Variable Name	SIDE_BY_SIDE_STAND_T
	Short Description	Side-by-Side Stand Time
	Source	Form B10-PHYSICAL FUNCTIONING
	Question Text	Side-by-Side Stand Time?
	Time of Collection	Baseline and Follow-up
	Data Type	Char
	Allowable Codes	1:00=MIN 9:99=MAX
	Missing OK If	NA
	Audit Findings	[JHU Audits]: B10 form error rate = 0.0% (based on 30 forms as of Dec2018)
	Comments	JHU phase only
12)	Variable Name	TANDEM_STAND_1
	Short Description	Tandem Stand (Trial 1)
	Source	Form B10-PHYSICAL FUNCTIONING
	Question Text	Tandem Stand?
	Time of Collection	Baseline and Follow-up
	Data Type	Char
	Allowable Codes	1=Participant refused 2=Not attempted, unable 3=Unable to attain position or hold for one second 4=Holds for >=1 but less than 10 seconds 5=Holds position for 10 seconds
	Missing OK If	NA
	Audit Findings	[JHU Audits]: B10 form error rate = 0.0% (based on 30 forms as of Dec2018)
	Comments	JHU phase only

13)	Variable Name	TANDEM_STAND_1_T
	Short Description	Tandem Stand (Trial 1) Time
	Source	Form B10-PHYSICAL FUNCTIONING
	Question Text	Tandem Stand Time?
	Time of Collection	Baseline and Follow-up
	Data Type	Char
	Allowable Codes	1:00=MIN 9:99=MAX
	Missing OK If	NA
	Audit Findings	[JHU Audits]: B10 form error rate = 0.0% (based on 30 forms as of Dec2018)
	Comments	JHU phase only

14)	Variable Name	TANDEM_STAND_2
	Short Description	Tandem Stand (Trial 2)
	Source	Form B10-PHYSICAL FUNCTIONING
	Question Text	Tandem Stand?
	Time of Collection	Baseline and Follow-up
	Data Type	Char
	Allowable Codes	1=Participant refused 2=Not attempted, unable 3=Unable to attain position or hold for one second 4=Holds for >=1 but less than 10 seconds 5=Holds position for 10 seconds
	Missing OK If	NA
	Audit Findings	[JHU Audits]: B10 form error rate = 0.0% (based on 30 forms as of Dec2018)
	Comments	JHU phase only

15)	Variable Name	TANDEM_STAND_2_T
	Short Description	Tandem Stand (Trial 2) Time
	Source	Form B10-PHYSICAL FUNCTIONING
	Question Text	Tandem Stand Time?
	Time of Collection	Baseline and Follow-up
	Data Type	Char
	Allowable Codes	1:00=MIN 9:99=MAX
	Missing OK If	NA
	Audit Findings	[JHU Audits]: B10 form error rate = 0.0% (based on 30 forms as of Dec2018)
	Comments	JHU phase only
16)	Variable Name	NORMAL_P_WALK_1
	Short Description	Normal Pace Walk (Trial 1)
	Source	Form B10-PHYSICAL FUNCTIONING
	Question Text	Normal Pace Walk?
	Time of Collection	Baseline and Follow-up
	Data Type	Char
	Allowable Codes	1=Participant refused 2=Not attempted, unable to walk 3=Completes with walking aid 4=Completes without walking aid
	Missing OK If	NA
	Audit Findings	[JHU Audits]: B10 form error rate = 0.0% (based on 30 forms as of Dec2018)
	Comments	JHU phase only

17)	Variable Name	NORMAL_P_WALK_1_T1
	Short Description	Normal Pace Walk (Trial 1) Time 1
	Source	Form B10-PHYSICAL FUNCTIONING
	Question Text	Normal Pace Walk Time 1?
	Time of Collection	Baseline and Follow-up
	Data Type	Char
	Allowable Codes	01:00=MIN 99:99=MAX
	Missing OK If	NA
	Audit Findings	[JHU Audits]: B10 form error rate = 0.0% (based on 30 forms as of Dec2018)
	Comments	JHU phase only

18)	Variable Name	NORMAL_P_WALK_1_T2
	Short Description	Normal Pace Walk (Trial 1) Time 2
	Source	Form B10-PHYSICAL FUNCTIONING
	Question Text	Normal Pace Walk Time 2?
	Time of Collection	Baseline and Follow-up
	Data Type	Char
	Allowable Codes	01:00=MIN 99:99=MAX
	Missing OK If	NA
	Audit Findings	[JHU Audits]: B10 form error rate = 0.0% (based on 30 forms as of Dec2018)
	Comments	JHU phase only

19)	Variable Name	NORMAL_P_WALK_2
	Short Description	Normal Pace Walk (Trial 2)
	Source	Form B10-PHYSICAL FUNCTIONING
	Question Text	Normal Pace Walk?
	Time of Collection	Baseline and Follow-up
	Data Type	Char
	Allowable Codes	1=Participant refused 2=Not attempted, unable to walk 3=Completes with walking aid 4=Completes without walking aid
	Missing OK If	NA
	Audit Findings	[JHU Audits]: B10 form error rate = 0.0% (based on 30 forms as of Dec2018)
	Comments	JHU phase only

20)	Variable Name	NORMAL_P_WALK_2_T1
	Short Description	Normal Pace Walk (Trial 2) Time 1
	Source	Form B10-PHYSICAL FUNCTIONING
	Question Text	Normal Pace Walk Time 1?
	Time of Collection	Baseline and Follow-up
	Data Type	Char
	Allowable Codes	01:00=MIN 99:99=MAX
	Missing OK If	NA
	Audit Findings	[JHU Audits]: B10 form error rate = 0.0% (based on 30 forms as of Dec2018)
	Comments	JHU phase only

21)	Variable Name	NORMAL_P_WALK_2_T2
	Short Description	Normal Pace Walk (Trial 2) Time 2
	Source	Form B10-PHYSICAL FUNCTIONING
	Question Text	Normal Pace Walk Time 2?
	Time of Collection	Baseline and Follow-up
	Data Type	Char
	Allowable Codes	01:00=MIN 99:99=MAX
	Missing OK If	NA
	Audit Findings	[JHU Audits]: B10 form error rate = 0.0% (based on 30 forms as of Dec2018)
	Comments	JHU phase only

22)	Variable Name	ARTHRITIS_PAIN
	Short Description	Pain or arthritis in either hand or wrist
	Source	Form B10-PHYSICAL FUNCTIONING
	Question Text	Pain or arthritis in either hand or wrist?
	Time of Collection	Baseline and Follow-up
	Data Type	Char
	Allowable Codes	1=Yes 0=No
	Missing OK If	NA
	Audit Findings	[JHU Audits]: B10 form error rate = 0.0% (based on 30 forms as of Dec2018)
	Comments	JHU phase only

23)	Variable Name	ARTHRITIS_PAIN_LOCATION
	Short Description	Location of pain or arthritis in hand or wrist
	Source	Form B10-PHYSICAL FUNCTIONING
	Question Text	Location of pain or arthritis in hand or wrist?
	Time of Collection	Baseline and Follow-up
	Data Type	Char
	Allowable Codes	1=Right 2=Left 3=Both
	Missing OK If	NA
	Audit Findings	[JHU Audits]: B10 form error rate = 0.0% (based on 30 forms as of Dec2018)
	Comments	JHU phase only

24)	Variable Name	ARTHRITIS_PAIN_WORSE
	Short Description	Pain or arthritis in hand or wrist worse
	Source	Form B10-PHYSICAL FUNCTIONING
	Question Text	Pain or arthritis in hand or wrist worse?
	Time of Collection	Baseline and Follow-up
	Data Type	Char
	Allowable Codes	1=Yes 0=No
	Missing OK If	NA
	Audit Findings	[JHU Audits]: B10 form error rate = 0.0% (based on 30 forms as of Dec2018)
	Comments	JHU phase only

25)	Variable Name	ARTHRITIS_PAIN_SQUEEZING
	Short Description	Pain or arthritis in hand or wrist interferes with squeezing
	Source	Form B10-PHYSICAL FUNCTIONING
	Question Text	Pain or arthritis in hand or wrist interferes with squeezing?
	Time of Collection	Baseline and Follow-up
	Data Type	Char
	Allowable Codes	1=Yes 0=No
	Missing OK If	NA
	Audit Findings	[JHU Audits]: B10 form error rate = 0.0% (based on 30 forms as of Dec2018)
	Comments	JHU phase only
26)	Variable Name	SURGERY_HAND_WRIST_3MO
	Short Description	Surgery on hand or wrist in the past 3 months
	Source	Form B10-PHYSICAL FUNCTIONING
	Question Text	Surgery on hand or wrist in the past 3 months?
	Time of Collection	Baseline and Follow-up
	Data Type	Char
	Allowable Codes	1=Yes 0=No
	Missing OK If	NA
	Audit Findings	[JHU Audits]: B10 form error rate = 0.0% (based on 30 forms as of Dec2018)
	Comments	JHU phase only

27)	Variable Name	SURGERY_LOCATION_HAND_WRIST
	Short Description	Location of surgery in hands or wrists
	Source	Form B10-PHYSICAL FUNCTIONING
	Question Text	Location of surgery in hands or wrists?
	Time of Collection	Baseline and Follow-up
	Data Type	Char
	Allowable Codes	1=Right 2=Left 3=Both
	Missing OK If	NA
	Audit Findings	[JHU Audits]: B10 form error rate = 0.0% (based on 30 forms as of Dec2018)
	Comments	JHU phase only

28)	Variable Name	HAND_PREFERRED_STRENGTH
	Short Description	Preferred hand for maximum strength
	Source	Form B10-PHYSICAL FUNCTIONING
	Question Text	Preferred hand for maximum strength?
	Time of Collection	Baseline and Follow-up
	Data Type	Char
	Allowable Codes	1=Right 2=Left 3=Both
	Missing OK If	NA
	Audit Findings	[JHU Audits]: B10 form error rate = 0.0% (based on 30 forms as of Dec2018)
	Comments	JHU phase only

29)	Variable Name	GRIP_STRENGTH_1
	Short Description	Grip Strength (trial 1)
	Source	Form B10-PHYSICAL FUNCTIONING
	Question Text	Grip Strength?
	Time of Collection	Baseline and Follow-up
	Data Type	Char
	Allowable Codes	01:00=MIN 99:99=MAX
	Missing OK If	NA
	Audit Findings	[JHU Audits]: B10 form error rate = 0.0% (based on 30 forms as of Dec2018)
	Comments	JHU phase only

30)	Variable Name	GRIP_STRENGTH_2
	Short Description	Grip Strength (trial 2)
	Source	Form B10-PHYSICAL FUNCTIONING
	Question Text	Grip Strength?
	Time of Collection	Baseline and Follow-up
	Data Type	Char
	Allowable Codes	01:00=MIN 99:99=MAX
	Missing OK If	NA
	Audit Findings	[JHU Audits]: B10 form error rate = 0.0% (based on 30 forms as of Dec2018)
	Comments	JHU phase only

31)	Variable Name	GRIP_STRENGTH_COMPLETE
	Short Description	Grip Strength completion status
	Source	Form B10-PHYSICAL FUNCTIONING
	Question Text	Grip Strength completion status?
	Time of Collection	Baseline and Follow-up
	Data Type	Char
	Allowable Codes	1=Did 1 trial 2=Did 2 trials 3=Excluded 4=Unable to do
	Missing OK If	NA
	Audit Findings	[JHU Audits]: B10 form error rate = 0.0% (based on 30 forms as of Dec2018)
	Comments	JHU phase only