

TABLE E-1 Items retained for the QuickDASH. The first column represents the domains of the full DASH questionnaire⁶, the second column contains the items retained in the QuickDASH, and the third column describes the rationale for selecting that particular item for the QuickDASH, or the rationale for excluding that domain. The goal was to reach the smallest number of items possible (n=11) while retaining a high Cronbach's alpha (0.90).

Domain (Hudak, 1996) ⁷	Item retained for QuickDASH	Rationale
Physical function		
daily activities	open tight, new jar	highest ranking of importance + difficulty unanimous inclusion vote by content experts
house/yard work	doing heavy household chores	highest ranking of importance + difficulty more applicable than gardening item
shopping	carry shopping bag	only shopping item in DASH
recreation	recreation requiring force	highest item-total correlation highest ranking of importance + difficulty
self care	wash back	deemed most applicable of self-care items across regions of the extremity, high ranking in difficulty to patients
sex	not included in QuickDASH	low acceptability in short questionnaire
eating	use knife to cut food	only DASH item in this domain
sleep	difficulty sleeping	only DASH item in this domain
Social		
friends	socializing with family and friends	only DASH item in this domain
family care	not included in QuickDASH	considered conceptually similar to socializing with family and friends
work	limited in work	only DASH item in this domain
Self image	not included in QuickDASH	different concept than function/symptoms
Pain	severity over past week	likely to capture most symptoms/types of pain
Stiffness	not included in QuickDASH	will likely have pain too, dropped
Weakness	not included in QuickDASH	will likely have pain too, dropped
Tingling/numbness	tingling in arm	will pick up nerve entrapments, retained

TABLE E-2 Four top-ranked items in terms of correlations with dichotomous markers of thresholds set at the 25th, 50th, and 75th percentile points in the distribution of overall DASH scores. The top four items were listed for each, and the item with the lowest correlation overall (item 23 on the DASH) was dropped to make the final item count eleven.

25th percentile	50th percentile	75th percentile
7. Heavy household chores (0.68)	5. Push open a heavy door (0.64)	4. Prepare a meal (0.65)
8. Garden/yardwork (0.64)	9. Make a bed (0.71)	10. Carry a shopping bag (0.68)
18. Recreational activity with force through arm (0.59)	11. Carry heavy objects (0.67)	13. Wash/dry hair (0.65)
23 Do usual work (0.58)	14. Wash back (0.65)	17. Recreational activity, light (0.65)

TABLE E-3 Results of the item-response theory (one parameter, Rasch) approach to item reduction. Items are ranked according to their Rasch item weight, going from items where difficulty is rarely encountered unless one is quite disabled to items which are more likely to be difficult even with minor disability.

Item	Rasch Weight (logit)	Infit Z score	Outfit Z score
Managing transportation needs	1.18	-0.3	-1.1
Using a key	1.09	2.4	2.2
Using a knife	0.70	1.5	0.1
Preparing a meal	0.51	-2.5	-2.9
Making a bed	0.15	-4.2	-3.9
Washing hair	0.08	1.5	1.1
Carrying shopping bag	0.02	-1.2	-0.9
Opening heavy door	-0.30	-1.0	0.9
Doing usual work	-1.00	2.2	3.4
Lifting heavy objects	-1.04	-0.7	-1.1
Doing household chores	-1.39	-1.6	-2.4

Table E-4. Item level responses to the different versions of the *QuickDASH* at baseline of cohort (n=200).

QuickDASH Item		Missing or n/a	Response: % of time having difficulty doing item					Mean (1-5 scale)	Item to total correlation
			1 no diff.	2	3	4	5 unable		
QuickDASH-concept Cronbach's Alpha = 0.92									
1	Opening a jar	1	18	24.5	18.5	21.5	16.5	2.9	0.65
2	Doing heavy household chores	2.5	13	16	22.5	21.5	24.5	3.3	0.81
3	Carrying a shopping bag	1.5	25.5	21	29	13.5	9.5	2.6	0.77
4	Washing your back	1.5	18.5	17	14	25	24	3.2	0.70
5	Using a knife	2	44	18	21	11.5	3.5	2.1	0.69
6	Recreational activities w force	6	7	10	16.5	25	35.5	3.8	0.65
7	Sleeping	0	21	22.5	28.5	23.5	4.5	2.7	0.62
8	Socializing with friends/family	1	32.5	27	20.5	16	3	2.3	0.71
9	Doing usual work	0	19.5	23.5	27	23	7	2.7	0.73
10	Pain severity	.50	4.5	24	36.5	27.5	7	3.1	0.70
11	Numbness/tingling severity	.50	39.5	21	24	11	4	2.2	0.46
QuickDASH - EITC Cronbach's Alpha = 0.95									
1	Making a meal	1	35.5	31	21.5	8.5	2.5	2.1	0.77
2	Opening a heavy door	2	20.5	23	24	22	8.5	2.7	0.84
3	Doing heavy household chores	2.5	13	16	22.5	21.5	24.5	3.3	0.87
4	Doing yardwork	6	11.5	18	22.5	19.5	22.5	3.3	0.86
5	Making a bed	2	29.5	20.5	30	13.5	4.5	2.4	0.82

6	Carrying a shopping bag	1.5	25.5	21	29	13.5	9.5	2.6	0.83
7	Lifting heavy objects	2.5	14	19	21	22	21.5	3.2	0.84
8	Washing your hair	2	24.5	22	22	21	8.5	2.7	0.79
9	Washing your back	1.5	18.5	17	14	25	24	3.2	0.72
10	Recreational activities - light	2	<u>46</u>	26.5	14.5	6.5	4.5	1.9	0.57
11	Recreational activities - w force	6	7	10	16.5	25	35.5	3.8	0.68

QuickDASH - Rasch Cronbach's Alpha = 0.95

1	Managing transportation needs	4.5	<u>46</u>	19.5	19.5	9.5	1	2.0	0.70
2	Using key	1	<u>50</u>	19.5	19.5	9	1	1.9	0.69
3	using a knife	2	<u>44</u>	18	21	11.5	3.5	2.1	0.77
4	preparing a meal	1	35.5	31	21.5	8.5	2.5	2.1	0.82
5	making a bed	2	29.5	20.5	30	13.5	4.5	2.4	0.81
6	washing hair	2	24.5	22	22	21	8.5	2.7	0.77
7	carrying shopping bag	1.5	25.5	21	29	13.5	9.5	2.6	0.83
8	pushing open heavy door	2	20.5	23	24	22	8.5	2.7	0.85
9	doing usual work	0	19.5	23.5	27	23	7	2.7	0.69
10	lifting heavy object	2.5	14	19	21	22	21.5	3.2	0.82
11	doing heavy household chores	2.5	13	16	22.5	21.5	24.5	3.3	0.82

Table E5. Univariate description of scores on the various versions of the QuickDASH and the full DASH

Descriptor	<i>QuickDASH</i> -concept	<i>QuickDASH</i> -EITC	<i>QuickDASH</i> -Rasch	Full DASH
n (number of scores available)	195	189	192	191
mean	45.3	45.6	37.9	43.9
standard deviation	23.2	26.2	25.1	22.9
75th	63.6	63.6	55	61.7
50th (median)	45.5	47.7	36.4	44.6
25th	25	22.7	15.9	25
Range of scores	0-93.2	0-100	0-93	0-93
Correlation with full DASH	0.98	0.98	0.97	1.00