

## Questionnaire: How to Score the DASH

The DASH (**D**isabilities of the **A**rm, **S**houlder, and **H**and) questionnaire has been developed to measure disability and symptoms related to upper extremity musculoskeletal disorders, thus eliminating the need for separate questionnaires for the shoulder, wrist, or elbow.

The 30-item questionnaire includes 21 physical function items, 6 symptom items, and 3 social/role function items. There are also two optional 4-item modules: one intended for athletes and musicians, and the other for working populations.

The DASH can be given at regular intervals at the clinician's discretion (e.g., weekly), or during the initial patient work up and then repeated at times of formal re-evaluation. It is a quantifiable method of tracking improvement or establishing maximum therapeutic effect. And to assess changes in the most problematic activities, practitioners can simply "eyeball" changes in a specific area or areas of the test.

That way, specific impairments or aggravations can be identified that may suggest a need for further therapeutic interventions.

The DASH is completed by the patient, minimizing observer bias in outcome assessment. It also allows for follow-up by mail for those who, for one reason or another, do not return for treatment.

### The DASH Questionnaire

The DASH has four sections: A-D. Parts A and B are required; Parts C and D are optional. Parts A and B—considered the Function/Symptom portion of the test—comprise 30 items that are marked from 1 (No Difficulty) to 5 (Unable).

Optional components C and D, involve questions about Sports/Performing Arts and Work and contain four questions each.

*The following is a sample from Part A of the DASH Questionnaire:*

	No Difficulty	Mild Difficulty	Moderate Difficulty	Severe Difficulty	Unable
1. Open a new or tight jar	1	2	3	4	5
2. Write	1	2	3	4	5
3. Turn a key	1	2	3	4	5
4. Prepare a meal	1	2	3	4	5

## Scoring Parts A and B (Function/Symptoms Section)

### In brief...

Use a calculator  
Add up the points marked by the patient  
Subtract 30  
Divide by 1.2  
The answer is the DASH score.

The response to the first 30 items of the DASH are added to form the raw, or actual, score. For example, if a patient answered 2, or Mild Difficulty, to all 30 questions, the raw score would be 60. A minimum score is 30; a maximum is 150. The range of the scores, therefore—from 30 to 150—equals 120.

The raw score is then transformed to a zero-to-100 scale with zero reflecting no disability (good function) and 100 reflecting maximum disability.

To transform the score to the zero-to-100 scale, you subtract the minimum possible score, or 30, from the raw score and divide by 1.2, which is the possible score range (120) divided by 100.

**Raw score – 30 (minimum score)**

**1.2 (range of scores ÷ 100)**

### Sample Score

Assume that a patient answered 15 of the 30 questions in Parts A and B with a 4, indicating “Severe Difficulty.” For the other 15 questions, the patient indicated a 5, or “Unable.” To get the Raw Score, 15 X 4 would be added to 15 X 5. Therefore, 60 would be added to 75 for a Raw Score of 135. Here is how a Raw Score of 135 would be transformed to the zero-to-100 scale.

$$\frac{135 - 30}{1.2} = 87.5$$

A score of 87.5 would indicate a high degree of disability.

**Please note:** Because the DASH is a relatively new test, a fixed scale indicating precise levels of disability corresponding to the numbers remains to be established. Studies to evaluate reliability, validity, and sensitivity to clinical change are currently being conducted.

## Scoring Optional Modules: Parts C and D (Sports/Music or Work)

### In brief...

Use a calculator  
Add up the points marked by the patient  
Subtract 4  
Divide by 0.16  
The answer is the DASH score.

Optional Parts C and D of the DASH each have four items. The goal of these sections is to include items in the DASH that capture the special difficulties not encountered in daily living by professional musicians, athletes, or those in certain occupations with upper extremity conditions or injuries.

The maximum score of this section is 20 with a minimum of 4. The range of scores is therefore 16. This score is also transformed to a zero-to-100 scale with lower scores reflecting minimal disability, and higher scores reflecting more disability. To transform the score to the zero-to-100 scale, you subtract minimum possible score, or 4, from the raw score and divide by 0.16, which is the possible score range (16) divided by 100.

**Raw score – 4 (minimum score)**

---

**0.16 (range of scores ÷ 100)**

### **Missing Items**

If less than 10% of items from Parts A and B (3 items or fewer) are left blank by the respondent, the mean average of the scores of the other items may be substituted. For example, if a person responds with 28 “3’s” and two blanks, the missing values can be replaced by a value of “3.” If more than 10% are left blank, you will not be able to calculate a DASH score. However, no questions can be skipped in the high performance Sports/ Music or Work modules because they have only 4 items each.

Copyright © 1999 Western States Chiropractic College

---

### **Primary Author**

- Owen T. Lynch, DC

### **Reviewed by CSPE Committee**

- Laura Baffes, DC
- Owen Conway, DC
- Daniel DeLapp, DC, DABCO, LAc, ND
- Kathleen Galligan, DC, DABCI
- Lorraine Ginter, DC
- Ronald LeFebvre, DC
- Owen T. Lynch, DC
- Steve Oliver, DC
- Karen E. Petzing, DC
- Ravid Raphael, DC, DABCO
- Anita Roberts, DC

### **References**

Adapted from “Scoring the DASH” from The Institute of Work & Health and the AAOS/COMSS/COSS Outcomes Data Collection Instruments, Toronto, Ontario, Canada.