

# Translation and cross-cultural adaptation of the Constant score into Danish.

A test protocol was developed to standardize the methodology of the score.

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Abstract:

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## Background:

The Constant Score is considered a reliable and valid shoulder score that combines patient-reported symptoms with objective assessment to evaluate several shoulder disorders. The score is commonly used, but has been criticised for imprecise terminology and lack of a standardised methodology. A modified guideline with several new recommendations was published in 2008, but a standardised test protocol was not included. The new version has never been translated into Danish.

## Purpose of Study:

1) To translate and cross-culturally adapt the Constant Score from the modified guidelines into a Danish version, and 2) to develop a standardised test protocol for the Constant score.

## Material and Methods:

A forward and back translation was conducted independently at 2 centres in Denmark according to international recommendations. Consensus of a preliminary version was achieved, which was tested on 6 patients (subjective part), while feedback was given from 2 health professionals for the objective part. Relevant items were culturally adapted and rephrased, and a back-translated Constant Score was forwarded to one of the authors of the updated English version.

## Results:

Only minor inconsistencies in translations were found. A few questions and words had to be rephrased due to cultural and linguistic differences between Denmark and England. The back-translated version was approved by one of the authors of the modified score, and a standardised test protocol with a detailed methodology guideline was developed.

## Conclusion:

We recommend this Danish Constant score for examination of Danish shoulder patients. However, testing of validity, reliability and responsiveness of the Danish translation in a Danish population needs to be done in future research.

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