

A User's Guide to:
Foot and Ankle Outcome Score
FAOS

FAOS was developed to assess the patients opinion about a variety of foot and ankle-related problems.

FAOS has this far been used in patients with lateral ankle instability, Achilles tendinosis, and plantar fasciitis.

FAOS content is based on the Knee injury and Osteoarthritis Outcome Score (KOOS), content validity was confirmed by 213 patients with ankle instability.

FAOS consists of 5 subscales; Pain, other Symptoms, Function in daily living (ADL), Function in sport and recreation (Sport(Rec), and foot and ankle-related Quality of Life (QOL). The last week is taken into consideration when answering the questionnaire. Standardized answer options are given (% Likert boxes) and each question gets a score from 0 to 4. A normalized score (100 indicating no symptoms and 0 indicating extreme symptoms) is calculated *for each subscale*. The result can be plotted as an outcome profile.

FAOS is patient-administered, the format is user friendly, and takes about 10 minutes to fill out.

FAOS is self-explanatory and can be administered in the waiting room or used as a mailed survey.

FAOS has been used in patients 20-60 years old.

FAOS reliability has been confirmed in patients with lateral ankle instability (see below).

FAOS responsiveness has been confirmed in patients undergoing treatment for Achilles tendinosis (see below) and plantar fasciitis (work in progress).

FAOS References

Validation of the Foot and Ankle Outcome Score for Ankle Ligament Reconstruction. Roos EM, Brandsson S, Karlsson J. Foot & Ankle Int 22(10):788-794: 2001

Abstract

We studied the validity and reliability of the Foot and Ankle Outcome Score (FAOS) when used to evaluate the outcome of 213 patients (mean age 40 years, 85 females) operated on average 12 years ago (range, 3-24) with an anatomical reconstruction of

the lateral ankle ligaments. The FAOS is a 42-item questionnaire assessing patient-relevant outcomes in five separate subscales (Pain, other Symptoms, Activities of daily living, Sport and recreation function, foot and ankle-related Quality of life). The FAOS met set criteria of validity and reliability. The FAOS appears to be useful for the evaluation of patient-relevant outcomes related to ankle reconstruction.

Eccentric calf-muscle exercises reduce pain and functional limitations due to achilles tendinosis. A prospective, randomized clinical trial with one-year follow-up.

Ewa Roos, Mikael Engström, Annika Lagerquist, Harald Roos, Bengt Söderberg.

Abstract (Presented at the American College of Rheumatology /ARHP congress, San Francisco 2001)

Current treatment methods may not significantly affect the natural history of Achilles tendinosis. Eccentric calf-muscle exercises have in uncontrolled studies shown good short-term results.

Objective. Study the effects of eccentric exercises on pain and function due to Achilles tendinosis.

Patients. 41 patients (20 women, mean age 45 (26-59), 89% active in sports) with insidious onset were recruited from primary care. Median symptom duration: 6 (1-180) months. One examiner verified symptoms 1-2 inches proximally of the insertion.

Methods. Randomized study with three treatment groups for 12 weeks: Eccentric exercises, night splint, or a combination of both treatments. Eccentric calf-muscle exercises (3x15 repetitions with straight and bent knee) were prescribed twice daily for 12 weeks. A ventral night splint, clinically known to reduce morning pain and stiffness, holding the foot in 90° of dorsiflexion was used. Pain and function were evaluated by a validated mailed survey, the Foot and Ankle Outcome Score (FAOS).w

Results. 32 patients has this far been evaluated at 6 weeks, 30 at 12 weeks, 30 at 26 weeks, and 23 at 52 weeks. The eccentric group reported a significant pain reduction (28% compared to baseline, $p=0.006$) already at 6 weeks which lasted for one year (36% compared to baseline, $p=0.007$). The groups treated with night splint (with or without eccentric exercises) reported less pain reduction (16 and 18% at 6 weeks, 18 and 8% at 12 weeks, and 12 and 13% at 26 weeks compared to baseline). From 26 to 52 weeks significant improvement occurred, and at 52 weeks all groups reported pain reduction of 27-36% ($p<0.04$) compared to baseline. Differences between groups were borderline significant at 12 weeks (Kruskal-Wallis, $p=0.06$). Similar results were seen for improvement in function.

Conclusion. Eccentric exercises reduced pain and functional limitations at 6 weeks. The effect lasted for 52 weeks. The use of a night splint seemed to eliminate the effect of the eccentric exercises. The initial improvement in the splint groups could be interpreted as a placebo effect. The improvement from 26 to 52 weeks in the splint groups could indicate spontaneous remission.

FAOS *Manual scoring sheet*

Instructions:

Assign the following scores to the boxes!

None	Mild	Moderate	Severe	Extreme
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
0	1	2	3	4

Missing data. If a mark is placed outside a box, the closest box is chosen. If two boxes are marked, that which indicated the more severe problems is chosen. Missing data are treated as such; one or two missing values are substituted with the average value for that subscale. If more than two items are omitted, the response is considered invalid and no subscale score is calculated.

Sum up the total score of each subscale and divide by the possible maximum score for the scale. Traditionally in orthopedics, 100 indicates no problems and 0 indicates extreme problems. The normalized score is transformed to meet this standard. Please use the formulas provided for each subscale!

$$1. \text{ PAIN} \quad 100 - \frac{\text{Total score P1-P9} \times 100}{36} = 100 - \frac{\quad}{36} = \underline{\quad}$$

$$2. \text{ SYMPTOMS} \quad 100 - \frac{\text{Total score S1-S7} \times 100}{28} = 100 - \frac{\quad}{28} = \underline{\quad}$$

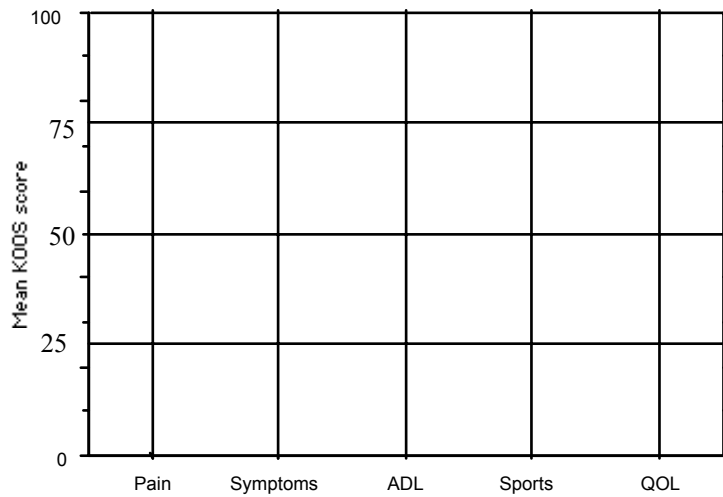
$$3. \text{ ADL} \quad 100 - \frac{\text{Total score A1-A17} \times 100}{68} = 100 - \frac{\quad}{68} = \underline{\quad}$$

$$4. \text{ SPORT\&REC} \quad 100 - \frac{\text{Total score SP1-SP5} \times 100}{20} = 100 - \frac{\quad}{20} = \underline{\quad}$$

$$5. \text{ QOL} \quad 100 - \frac{\text{Total score Q1-Q4} \times 100}{16} = 100 - \frac{\quad}{16} = \underline{\quad}$$

FAOS Profile

To visualize differences in the five different FAOS subscores and change between different administrations of the FAOS (e.g. pre-treatment to post-treatment), FAOS Profiles can be plotted.



Legend

Symbol/color	Description (pre-treatment, post-treatment etc)	Date

Name: _____