

Online supplementary material S5: GRADE Summary of Findings

GRADE Summary of Findings

Self-management in inflammatory arthritis

Cognitive Behavior Therapy

Patients or population: Adult patients with rheumatoid arthritis, ankylosing spondylitis, early inflammatory arthritis or psoriatic arthritis

Setting: Self-help organization, hospital, online platform

Comparison: Waiting list, arthritis education, patients without spouse, fatigue information alone, standard programme, usual care

| Outcomes | Impact | № of participants (studies) | Certainty of the evidence (GRADE) |
|---|--|-----------------------------|--|
| Functional disability Several instruments were used to measure this outcome | Effective short and long-term improvements with small positive effects* | 633 patients (6 RCTs) | ⊕⊕○○ LOW due to inconsistency (due to significant heterogeneity) and imprecision (due to non-significant effect sizes) |
| Disease activity Several instruments were used to measure this outcome | Effective short and long-term improvements with small positive effects* | 466 patients (4 RCTs) | ⊕⊕○○ LOW due to inconsistency (due to significant heterogeneity) and imprecision (due to non-significant effect sizes) |
| Impairment/ disability Several instruments were used to measure this outcome | Effective short and long-term improvements with small positive effects* | 165 patients (2 RCTs) | ⊕⊕⊕○ MODERATE due to inconsistency (due to significant heterogeneity) |
| Anxiety/ depression Several instruments were used to measure this outcome | Effective short and medium improvements with moderate positive effects** | 392 patients (4 RCTs) | ⊕⊕○○ LOW due to inconsistency (due to significant heterogeneity) and imprecision (due to non-significant effect sizes) |
| Psychophysiological complains Several instruments were used to measure this outcome | Effective short and long-term improvements with small to moderate positive effects** | 660 patients (6 RCTs) | ⊕⊕○○ LOW due to inconsistency (due to significant heterogeneity) and imprecision (due to non-significant effect sizes) |
| Sleep problems Several instruments were used to measure this outcome | Effective short-term improvement with moderate positive effects** | 165 patients (2 RCTs) | ⊕⊕○○ LOW due to inconsistency (due to significant heterogeneity) and imprecision (due to non-significant effect sizes) |
| Pain Several instruments were used to measure this outcome | Effective short and long-term improvements with small positive effects* | 560 patients (5 RCTs) | ⊕⊕○○ LOW due to inconsistency (due to significant heterogeneity) and imprecision (due to non-significant effect sizes) |

| | | | |
|--|--|-----------------------|--|
| Self-efficacy/ self-helplessness Several instruments were used to measure this outcome | Effective short and long-term improvements with small to moderate positive effects** | 461 patients (3 RCTs) | ⊕⊕⊕○ MODERATE due to inconsistency (due to significant heterogeneity) |
| Quality of life/ health status/ social support Several instruments were used to measure this outcome | Effective long-term improvement with positive effects | 353 patients (3 RCTs) | ⊕⊕○○ LOW due to inconsistency (due to significant heterogeneity) and imprecision (due to non-significant effect sizes) |
| Health care use Several instruments were used to measure this outcome | No effect or difference compared to a control treatment | 167 patients (1 RCT) | ⊕⊕○○ LOW due to inconsistency (due to significant heterogeneity) and imprecision (due to non-significant effect sizes) |
| Fatigue Several instruments were used to measure this outcome | Effective short and long-term improvements with small to moderate positive effects** | 352 patients (3 RCTs) | ⊕⊕⊕○ MODERATE due to inconsistency (due to significant heterogeneity) |

Response training

Patients or population: Adult patients with rheumatoid arthritis or early rheumatoid arthritis

Setting: Hospital

Comparison: Usual care or arthritis education

| Outcomes | Impact | № of participants (studies) | Certainty of the evidence (GRADE) |
|--|--|-----------------------------|--|
| Functional disability Several instruments were used to measure this outcome | Effective short and long-term improvements with small to moderate positive effects** | 276 patients (2 RCTs) | ⊕⊕⊕○ MODERATE due to inconsistency (due to significant heterogeneity) |
| Disease activity Several instruments were used to measure this outcome | Effective short and long-term improvements with small to moderate positive effects** | 276 patients (2 RCTs) | ⊕⊕⊕○ MODERATE due to inconsistency (due to significant heterogeneity) |
| Impairment/ disability Several instruments were used to measure this outcome | Effective long-term improvement with small to moderate positive effects** | 108 patients (1 RCT) | ⊕⊕⊕○ MODERATE due to inconsistency (due to significant heterogeneity) |
| Psychophysiological complains Several instruments were used to measure this outcome | No effect or difference compared to a control treatment | 168 patients (1 RCT) | ⊕⊕○○ LOW due to inconsistency (due to significant heterogeneity) and imprecision (due to non-significant effect sizes) |
| Pain Several instruments were used to measure this outcome | Effective short and long-term improvements with small to moderate positive effects** | 276 patients (2 RCTs) | ⊕⊕⊕○ MODERATE due to inconsistency (due to significant heterogeneity) |
| Self-Efficacy/ self-helplessness Several instruments were used to measure this outcome | Effective short and long-term improvements with small to moderate positive effects** | 108 patients (1 RCT) | ⊕⊕⊕○ MODERATE due to inconsistency (due to significant heterogeneity) |

| Quality of life/Health status/Social support Several instruments were used to measure this outcome | Effective short and long-term improvements with small to moderate positive effects** | 108 patients (1 RCT) | ⊕⊕⊕○ MODERATE due to inconsistency (due to significant heterogeneity) |
|--|--|-----------------------------|--|
| Fatigue Several instruments were used to measure this outcome | Effective short and long-term improvements with small to moderate positive effects** | 108 patients (1 RCT) | ⊕⊕⊕○ MODERATE due to inconsistency (due to significant heterogeneity) |
| Specific interactive disease education | | | |
| Patients or population: Adult patients with rheumatoid arthritis or early rheumatoid arthritis | | | |
| Setting: Hospital, online platform and community | | | |
| Comparison: Arthritis education, waiting list, self-administered exercise, control writing+control training, usual care | | | |
| Outcomes | Impact | № of participants (studies) | Certainty of the evidence (GRADE) |
| Knowledge Several instruments were used to measure this outcome | Effective long-term improvement with positive effects | 208 patients (1 RCT) | ⊕⊕⊕○ MODERATE due to inconsistency (due to significant heterogeneity) |
| Functional disability Several instruments were used to measure this outcome | Effective short and long-term improvements with small to moderate positive effects** | 1065 patients (8 RCTs) | ⊕⊕○○ LOW due to inconsistency (due to significant heterogeneity) and imprecision (due to non-significant effect sizes) |
| Disease activity Several instruments were used to measure this outcome | Effective short and long-term improvements with small to moderate positive effects** | 1065 patients (8 RCTs) | ⊕⊕○○ LOW due to inconsistency (due to significant heterogeneity) and imprecision (due to non-significant effect sizes) |
| Impairment/ disability Several instruments were used to measure this outcome | Effective short and long-term improvements with small to moderate positive effects** | 453 patients (3 RCTs) | ⊕⊕○○ LOW due to inconsistency (due to significant heterogeneity) and imprecision (due to non-significant effect sizes) |
| Anxiety/ depression Several instruments were used to measure this outcome | No effect or difference compared to a control treatment | 586 patients (5 RCTs) | ⊕⊕⊕○ MODERATE due to inconsistency (due to significant heterogeneity) |
| Psychophysiological complains Several instruments were used to measure this outcome | No effect or difference compared to a control treatment | 600 patients (3 RCTs) | ⊕⊕⊕○ MODERATE due to inconsistency (due to significant heterogeneity) |
| Pain Several instruments were used to measure this outcome | Effective short and long-term improvements with small to moderate positive effects** | 997 patients (7 RCTs) | ⊕⊕○○ LOW due to inconsistency (due to significant heterogeneity) and imprecision (due to non-significant effect sizes) |
| Self-efficacy/ self-helplessness Several instruments were used to measure this outcome | Effective short and long-term improvements with small to moderate positive effects** | 866 patients (6 RCTs) | ⊕⊕○○ LOW due to inconsistency (due to significant heterogeneity) and imprecision (due to non-significant effect sizes) |

| Quality of life/ health status/ social support Several instruments were used to measure this outcome | Effective short and long-term improvements with small to moderate positive effects** | 788 patients (5 RCTs) | ⊕⊕○○ LOW due to inconsistency (due to significant heterogeneity) and imprecision (due to non-significant effect sizes) |
|--|--|-----------------------------|--|
| Fatigue Several instruments were used to measure this outcome | Effective short and long-term improvements with small positive effects* | 551 patients (4 RCTs) | ⊕⊕○○ LOW due to inconsistency (due to significant heterogeneity) and imprecision (due to non-significant effect sizes) |
| Goal setting | | | |
| Patients or population: Adult patients with rheumatoid arthritis or early rheumatoid arthritis | | | |
| Setting: Hospital | | | |
| Comparison: Arthritis education, education, fatigue information alone, usual care | | | |
| Outcomes | Impact | № of participants (studies) | Certainty of the evidence (GRADE) |
| Functional disability Several instruments were used to measure this outcome | Effective short and long-term improvements with small to moderate positive effects** | 632 patients (6 RCTs) | ⊕⊕○○ LOW due to inconsistency (due to significant heterogeneity) and imprecision (due to non-significant effect sizes) |
| Disease activity Several instruments were used to measure this outcome | Effective short and long-term improvements with small to moderate positive effects** | 452 patients (4 RCTs) | ⊕⊕○○ LOW due to inconsistency (due to significant heterogeneity) and imprecision (due to non-significant effect sizes) |
| Impairment / disability Several instruments were used to measure this outcome | Effective short-term improvement with moderate positive effects** | 126 patients (1 RCT) | ⊕⊕⊕○ MODERATE due to inconsistency (due to significant heterogeneity) |
| Anxiety/ depression Several instruments were used to measure this outcome | Effective short and long-term improvements with small to moderate positive effects** | 317 patients (4 RCTs) | ⊕⊕○○ LOW due to inconsistency (due to significant heterogeneity) and imprecision (due to non-significant effect sizes) |
| Psychophysiological complains Several instruments were used to measure this outcome | Effective short-term improvement with small positive effects* | 281 patients (3 RCTs) | ⊕⊕○○ LOW due to inconsistency (due to significant heterogeneity) and imprecision (due to non-significant effect sizes) |
| Sleep problems Several instruments were used to measure this outcome | Effective short-term improvement with moderate positive effects** | 126 patients (1 RCT) | ⊕⊕⊕○ MODERATE due to inconsistency (due to significant heterogeneity) |
| Pain Several instruments were used to measure this outcome | Effective short and long-term improvements with small positive effects* | 227 patients (2 RCTs) | ⊕⊕○○ LOW due to inconsistency (due to significant heterogeneity) and imprecision (due to non-significant effect sizes) |

| Self-efficacy/ self-helplessness Several instruments were used to measure this outcome | Effective short-term improvement with small positive effects* | 405 patients (4 RCTs) | ⊕⊕○○ LOW due to inconsistency (due to significant heterogeneity) and imprecision (due to non-significant effect sizes) |
|--|--|-----------------------------|--|
| Quality of life/ health status/ social support Several instruments were used to measure this outcome | Effective short and long-term improvements with small positive effects* | 327 patients (3 RCTs) | ⊕⊕○○ LOW due to inconsistency (due to significant heterogeneity) and imprecision (due to non-significant effect sizes) |
| Fatigue Several instruments were used to measure this outcome | Effective short and long-term improvements with moderate positive effects** | 263 patients (3 RCTs) | ⊕⊕○○ LOW due to inconsistency (due to significant heterogeneity) and imprecision (due to non-significant effect sizes) |
| Problem solving | | | |
| Patients or population: Adult patients with rheumatoid arthritis, ankylosing spondylitis, early inflammatory arthritis or psoriatic arthritis | | | |
| Setting: Hospital and online platform | | | |
| Comparison: Arthritis education, waiting list, education, fatigue information alone, control writing+control training, usual care | | | |
| Outcomes | Impact | № of participants (studies) | Certainty of the evidence (GRADE) |
| Functional disability Several instruments were used to measure this outcome | Effective short and long-term improvements with small to moderate positive effects** | 1063 patients (8 RCTs) | ⊕⊕○○ LOW due to inconsistency (due to significant heterogeneity) and imprecision (due to non-significant effect sizes) |
| Disease activity Several instruments were used to measure this outcome | Effective short and long-term improvements with small to moderate positive effects** | 716 patients (5 RCTs) | ⊕⊕○○ LOW due to inconsistency (due to significant heterogeneity) and imprecision (due to non-significant effect sizes) |
| Impairment/ disability Several instruments were used to measure this outcome | Effective short improvement with moderate positive effects** | 390 patients (2 RCTs) | ⊕⊕○○ LOW due to inconsistency (due to significant heterogeneity) and imprecision (due to non-significant effect sizes) |
| Anxiety/ depression Several instruments were used to measure this outcome | Effective short and long-term improvements with small to moderate positive effects** | 485 patients (5 RCTs) | ⊕⊕○○ LOW due to inconsistency (due to significant heterogeneity) and imprecision (due to non-significant effect sizes) |
| Psychophysiological complains Several instruments were used to measure this outcome | Effective short and long-term improvements with small to moderate positive effects** | 880 patients (6 RCTs) | ⊕⊕○○ LOW due to inconsistency (due to significant heterogeneity) and imprecision (due to non-significant effect sizes) |
| Sleep problems Several instruments were used to measure this outcome | Effective short improvement with moderate positive effects** | 126 patients (1 RCT) | ⊕⊕⊕○ MODERATE due to inconsistency (due to significant heterogeneity) |

| | | | |
|--|--|-----------------------|--|
| Pain Several instruments were used to measure this outcome | Effective short and long-term improvements with small positive effects* | 826 patients (5 RCTs) | ⊕⊕○○ LOW due to inconsistency (due to significant heterogeneity) and imprecision (due to non-significant effect sizes) |
| Self-efficacy/ self-helplessness Several instruments were used to measure this outcome | Effective short and long-term improvements with small to moderate positive effects** | 740 patients (6 RCTs) | ⊕⊕○○ LOW due to inconsistency (due to significant heterogeneity) and imprecision (due to non-significant effect sizes) |
| Quality of life/ health status/ social support Several instruments were used to measure this outcome | Effective short and long-term improvements with small to moderate positive effects** | 495 patients (4 RCTs) | ⊕⊕○○ LOW due to inconsistency (due to significant heterogeneity) and imprecision (due to non-significant effect sizes) |
| Health care use Several instruments were used to measure this outcome | No effect or difference compared to a control treatment | 167 patients (1 RCT) | ⊕⊕⊕○ MODERATE due to inconsistency (due to significant heterogeneity) |
| Fatigue Several instruments were used to measure this outcome | Effective short and long-term improvements with small to moderate positive effects** | 430 patients (4 RCTs) | ⊕⊕○○ LOW due to inconsistency (due to significant heterogeneity) and imprecision (due to non-significant effect sizes) |

Multicomponent or single exercise / physical activity interventions

Patients or population: Adult patients with rheumatoid arthritis and ankylosing spondylitis

Setting: Home, hospitals, spas, pools, fitness centres

Interventions: Multi-component exercises involving resistance, strengthening, aerobic exercises and flexibility or single modalities of exercise; yoga; Tai Chi; specific aquatic exercises (e.g. swimming)

Comparison: No exercise, usual care, non-aerobic exercises, range of motion exercises or education No exercise, usual care, non-aerobic exercises, range of motion exercises or education, alternative exercise method, home exercise regimes

| Outcomes | Impact | № of participants (studies) | Certainty of the evidence (GRADE) |
|---|--|-----------------------------|--|
| Pain Several instruments were used to measure this outcome | Effective improvement with small positive effects* | 58 RCTs (5 reviews) | ⊕⊕⊕○ MODERATE due to inconsistency (due to significant heterogeneity) |
| Functional disability Several instruments were used to measure this outcome | Effective improvement with small positive effects* | 26 RCTs (3 reviews) | ⊕⊕○○ LOW due to inconsistency (due to significant heterogeneity) and imprecision (due to non-significant effect sizes) |
| Fatigue Several instruments were used to measure this outcome | Effective improvement with small positive effects* | 24 RCTs (1 review) | ⊕⊕⊕⊕ HIGH |
| Patient Global Assessment | Effective improvement with small positive effects* | 11 RCTs (1 review) | ⊕⊕⊕○ MODERATE due to inconsistency (due to significant heterogeneity) |

| | | | |
|---------------|---|---------------------|---|
| BASDAI | Effective improvement with small positive effects* | 16 RCTs (2 reviews) | ⊕⊕○○ LOW due to inconsistency (due to significant heterogeneity) and publication bias (due to not having been being assessed) |
| BASFI | Effective improvement with small positive effects* | 16 RCTs (2 reviews) | ⊕⊕○○ LOW due to inconsistency (due to significant heterogeneity) and publication bias (due to not having been being assessed) |
| DAS-28 | No effect or difference compared to a control treatment | 7 RCTs (1 review) | ⊕○○○ VERY LOW due to inconsistency (due to significant heterogeneity), imprecision (due to non-significant effect sizes) and publication bias (due to not having been being assessed) |

Psychosocial interventions

Patients or population: Adult patients with inflammatory arthritis [rheumatoid arthritis (mainly), psoriatic arthritis and ankylosing spondylitis]

Setting: Home, fitness centres (majority not stated)

Interventions: Expressive writing, cognitive skills training, cognitive behavioral interventions which involve the combination of relaxation, biofeedback, imagery, stress management, or the teaching of cognitive coping skills; mindfulness-based interventions, lifestyle management, patient education incorporating energy conservation, self-management interventions, group education, counselling, psychotherapy, relaxation, cognitive pain management strategies, contracting, goal setting, provision of feedback, cognitive restructuring, joint protection, problem solving, guided imagery, self-instruction

Comparison: Usual medical care, social support, support group, symptom monitoring wait list control, occupational therapy, education, or no intervention

| Outcomes | Impact | No of participants (studies) | Certainty of the evidence (GRADE) |
|---|--|------------------------------|---|
| Pain Several instruments were used to measure this outcome | Effective short and long-term improvements with small to moderate positive effects** | 88 RCTs (4 reviews) | ⊕⊕⊕○ MODERATE due to inconsistency (due to significant heterogeneity) |
| Functional disability Several instruments were used to measure this outcome | Effective short-term improvement with small positive effects* | 83 RCTs (3 reviews) | ⊕⊕⊕○ MODERATE due to inconsistency (due to significant heterogeneity) |
| Fatigue Several instruments were used to measure this outcome | Effective improvement with small positive effects* | 24 RCTs (1 review) | ⊕⊕⊕○ MODERATE due to inconsistency (due to significant heterogeneity) |
| Psychological status Several instruments were used to measure this outcome | Effective short and long-term improvements with small positive effects* | 25 RCTs (1 review) | ⊕⊕⊕○ MODERATE due to inconsistency (due to significant heterogeneity) |
| Physical activity Several instruments were used to measure this outcome | Effective short and long-term improvements with small to moderate positive effects** | 27 RCTs (1 review) | ⊕⊕⊕○ MODERATE due to inconsistency (due to significant heterogeneity) |

| | | | |
|---|---|---------------------|---|
| Depression Several instruments were used to measure this outcome | Effective short and long-term improvements with small positive effects* | 27 RCTs (1 review) | ⊕⊕⊕○ MODERATE due to inconsistency (due to significant heterogeneity) |
| Anxiety Several instruments were used to measure this outcome | Effective long-term improvements with small positive effects* | 27 RCTs (1 review) | ⊕⊕⊕○ MODERATE due to inconsistency (due to significant heterogeneity) |
| Tender joints | Effective long-term improvement with small positive effects* | 25 RCTs (1 review) | ⊕⊕⊕○ MODERATE due to inconsistency (due to significant heterogeneity) |
| Coping Several instruments were used to measure this outcome | Effective short and long-term improvements with moderate positive effects** | 25 RCTs (1 review) | ⊕⊕⊕○ MODERATE due to inconsistency (due to significant heterogeneity) |
| Self-efficacy Several instruments were used to measure this outcome | Effective short-term improvement with small positive effects* | 56 RCTs (2 reviews) | ⊕⊕⊕○ MODERATE due to inconsistency (due to significant heterogeneity) |
| DAS-28 | No effect or difference compared to a control treatment | 5 RCTs (1 review) | ⊕○○○ VERY LOW due to inconsistency (due to significant heterogeneity), imprecision (due to non-significant effect sizes) and publication bias (due to not having been being assessed) |

Self-management interventions

Patients or population: Adult patients with inflammatory arthritis (rheumatoid arthritis and psoriatic arthritis)

Setting: Home, although the majority not stated it

Interventions: Self-management interventions (including swimming sessions, relaxation, exercises, low impact land-based exercises, sessions on activities of daily living and education-discussion sessions, walking and Tai Chi)

Comparison: Waiting-list control, education booklet, usual care, standard programs, no treatment

| Outcomes | Impact | No of participants (studies) | Certainty of the evidence (GRADE) |
|---|---|------------------------------|---|
| Pain Several instruments were used to measure this outcome | Effective short and long-term improvements with small positive effects* | 19 RCTs (1 review) | ⊕⊕○○ LOW due to inconsistency (due to significant heterogeneity) and publication bias (due to not having been being assessed) |
| Functional disability Several instruments were used to measure this outcome | No effect or difference compared to a control treatment | 19 RCTs (1 review) | ⊕○○○ VERY LOW due to inconsistency (due to significant heterogeneity), imprecision (due to non-significant effect sizes) and publication bias (due to not having been being assessed) |

Educational interventions

Patients or population: Adult patients with rheumatoid arthritis

Setting: Hospital

Interventions: Educational Interventions, information only, leaflets, counselling, behavioural treatment, joint protection and energy conservation, disease education, range of motion and strengthening, physical agent modalities, cognitive rehabilitation, environmental adaptation, provision of adaptive equipment, maintaining activities

Comparison: Symptom monitoring, no-intervention, waiting list controls, standard rheumatologic care, lectures, other leaflets, or education

| Outcomes | Impact | № of participants (studies) | Certainty of the evidence (GRADE) |
|---|--|---|---|
| Pain Several instruments were used to measure this outcome | Effective improvement with positive effects | 22 RCTs (1 review) 208 patients (2 RCTs) | ⊕⊕⊕○ MODERATE due to inconsistency (due to significant heterogeneity) |
| Fatigue Several instruments were used to measure this outcome | Effective improvement with positive effects | 22 RCTs (1 review) 78 patients (1 RCT) | ⊕○○○ VERY LOW due to inconsistency (due to significant heterogeneity), imprecision (due to non-significant effect sizes) and publication bias (due to not having been assessed) |
| Functional disability Several instruments were used to measure this outcome | Effective short-term improvement with small positive effects* | 50 RCTs (1 review) 137 patients (2 RCTs) | ⊕⊕⊕○ MODERATE due to inconsistency (due to significant heterogeneity) |
| Joint counts | Effective short-term improvement with small positive effects* | 50 RCTs (1 review) | ⊕⊕⊕○ MODERATE due to inconsistency (due to significant heterogeneity) |
| Patient Global Assessment | Effective short-term improvement with small positive effects* | 50 RCTs (1 review) | ⊕⊕⊕○ MODERATE due to inconsistency (due to significant heterogeneity)) |
| Psychological status Several instruments were used to measure this outcome | Effective short-term improvement with small positive effects* | 50 RCTs (1 review) | ⊕⊕⊕○ MODERATE due to inconsistency (due to significant heterogeneity) |
| Depression Several instruments were used to measure this outcome | Effective short-term improvement with small positive effects* | 50 RCTs (1 review) 245 patients (3 RCTs) | ⊕⊕⊕○ MODERATE due to inconsistency (due to significant heterogeneity) |
| Adherence Measured by pharmacological marker | Effective improvement with positive effects | 100 patients (1 RCTs) | ⊕⊕⊕○ MODERATE due to inconsistency (due to significant heterogeneity) |
| Self-efficacy Several instruments were used to measure this outcome | Effective short and long-term improvement with small positive effects* | 132 patients (2 RCTs) | ⊕⊕⊕○ MODERATE due to inconsistency (due to significant heterogeneity) |

*The effect is interpreted as **small positive** because it is less than 0.40

The effect is interpreted as **moderate positive because it is greater than 0.40 and less than 0.80

GRADE Working Group grades of evidence

High certainty: We are very confident that the true effect lies close to that of the estimate of the effect

Moderate certainty: We are moderately confident in the effect estimate: The true effect is likely to be close to the estimate of the effect, but there is a possibility that it is substantially different

Low certainty: Our confidence in the effect estimate is limited: The true effect may be substantially different from the estimate of the effect

Very low certainty: We have very little confidence in the effect estimate: The true effect is likely to be substantially different from the estimate of effect
