Conclusion: The results showed that the positive effect of multimodal occupational therapy on pain and hand function persisted over the 2-year period, however, no significant between-groups difference over time was found. No significant between-group differences were found when dividing into sub-groups, however, those later undergoing surgery in the control group scored significantly worse on pain and hand function at the time of surgical consultation. The results may imply that patients who would benefit from surgery were identified, and that surgery does not give an additional benefit in patients who have received multimodal occupational therapy. This needs to be further investigated.

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OP0158-HPR THE FALL PREVENTION PROGRAMME 'SICHER DURCH DEN ALLTAG' IS EFFECTIVE AND COST-EFFECTIVE

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Background: Falls in older people are frequent and have often severe health consequences. Reinforced by population ageing, they represent a substantial challenge for health care systems. Falls are often due to a combination of intrinsic and extrinsic risk factors. For these reasons, the Swiss League Against Rheumatism (SLAR) developed the multidimensional, home-based fall prevention programme 'Sicher durch den Alltag' ('Safely Through Everyday Life'). The programme has been implemented nationwide since 2013 and is financed by selected health insurance companies. Trained physiotherapists (PTs) or occupational therapists (OTs) visit the senior at home for a 60-90 minutes session. They perform a detailed assessment of the senior's individual risk of falling and subsequently eliminate identified environmental risk factors and provide tailored exercises. After 4 weeks, the PT/OT calls the senior to discuss further needs. The cost of the intervention is at 500 Swiss Francs (approximately 460 Euro) per senior.

Objectives: Assess the effectiveness and cost-effectiveness of this fall prevention programme.

Methods: A prospective, longitudinal observational study was performed. Baseline study data was assessed at the home visit, including the self-reported number of falls during a) the year and b) the month before the visit. The participants of the programme were monitored for one year after the home visit by bi-monthly telephone calls. Participants were asked to report the falls that they continuously documented in a diary. Questionnaires administered orally included the Falls Efficacy Scale-International (FES-I), a Quality of Life Questionnaire (EQ-5D-5L), and the amount of moderately intensive physical activity (PA). To compare the falls during the years before and after the home visit, the mean number of falls before the visit was calculated based on reported falls during a) the year and b) the month (multiplied by 12) before the visit. A 2:1 weighted mean from a) and b) was calculated, considering that retrospective reporting over one year or over one month may underestimate or overestimate, respectively, the number of falls. Statistical analysis fitted a GEE-Poisson-Modell (Generalized Estimating Equations) to the data for number of falls and a Linear Mixed Model (LMM) for fear of falling, quality of life and PA. Falls related health care spending in the years before and after the intervention were compared based on health insurance claims data.

Results: Overall, 639 person-years of observation time were available for analysis. Participants were mainly female (59%) and had a mean age of 81.8±5.2 years. On average, rate of falling decreased from 1.35 to 1.02 per person year (-23.9%), fear of falling decreased by -1.27 (95%CI -1.50, -1.05), quality of life improved by -0.88 (95%CI -1.09, -0.68), PA increased by 9.87 minutes per day (95%CI 5.65, 14.09). Health insurance claims data showed a 48.0% reduction (95%CI 30.5%, 61.0%) of medically treated falls. The average cost per prevented medically treated fall was estimated at 1317 Swiss Francs (approximately 1200 Euro) and the probability of the intervention being cost-saving at 47%.

Conclusion: This low-threshold fall prevention programme was found to be very effective and cost-effective. Home visits by trained PTs or OTs contribute substantially to reduce falls in the elderly. The high cost-effectiveness is explained by a substantial reduction of severe falls.

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OP0159-HPR IMPACT OF NON-PHARMACOLOGICAL INTERVENTIONS TARGETING SLEEP DISTURBANCES OR DISORDERS IN PATIENTS WITH INFLAMMATORY ARTHRITIS: A SYSTEMATIC REVIEW AND META-ANALYSIS OF RANDOMISED TRIALS

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Background: Patients with inflammatory arthritis (IA) often present limitations in daily life due to unpredictability, severity and chronicity of the disease, reduced functional ability and health-related quality of life. Moreover, sleep disturbances or disorders have been reported in up to 40-90% of patients with IA [1-3]. Sleep disturbances are further associated with pain, fatigue, mental well-being and disease activity [4]. As chronic use of hypnotic drugs are associated with tolerance and side effects, there is growing interest in non-pharmacological management to improve sleep.

Objectives: With a systematic review and meta-analysis, our primary objective was to evaluate the evidence of non-pharmacological interventions targeting sleep in patients with IA. Primary outcome was sleep domains, while secondary objectives were based on the core outcome domains for IA trials and harms.

Methods: Following protocol closure, a systematic search was undertaken in MEDLINE, CENTRAL, PsycINFO, CINAHL, ClinicalTrials.gov, ACR and EULAR in September 2020. Eligible studies were randomised trials with adults with IA and concomitant sleep disturbances or disorders, comparing a non-pharmacological intervention targeting sleep disturbances or disorders to another non-pharmacological intervention, a pharmacological intervention or standard care. Screening of titles, abstracts, and subsequent full text assessment were conducted independently by two reviewers using the Covidence tool. Randomisation, blinding, and adequacy of analyses was assessed using the Cochrane's RoB tool and the overall quality of evidence was rated using GRADE methodology. Disagreements were resolved at consensus meetings with last authors. Effect sizes for continuous outcomes were based on the standardised mean difference (SMD), combined using standard random-effects meta-analysis (all with 95% CIs).

Results: Six trials (308 patients) were included in the quantitative synthesis. Two trials included patients with the sleep disorder insomnia and the remaining four trials included patients with sleep disturbances. Sleep domains were measured with Pittsburgh Sleep Quality Index (PSQI) or Insomnia Severity index (ISI). Three trials reported improvement on sleep following foot reflexology, auricular plaster therapy, and exercise. The overall meta-analysis presented in the figure of forest plot for self-reported sleep suggests that non-pharmacological interventions have a potentially large effect size of -0.80 (95% CI, -1.33 to -0.28) on sleep. However, the quality of the evidence was assessed as corresponding to low, given that the body of the evidence was rated down twice, due to serious study limitations and inconsistency.

Figure. Forest plot for self-reported sleep

Conclusion: Although the effect of non-pharmacological interventions targeting sleep disturbances or the sleep disorder insomnia was statistically highly significant, the implication for clinical practice is questionable because of the overall quality evidence. None of the core outcomes used in contemporary IA trials have indicated clinical benefit in favour of non-pharmacological interventions targeting sleep disturbances or disorders.

In conclusion, more rigorous research on non-pharmacological management of sleep disturbances and disorders is urgently needed, also aimed at specific sleep disorders, in order to fully reveal the clinical utility of these novel treatment options. At this point, non-pharmacological treatment of sleep disturbances or disorders is promising and potentially highly effective, and may have the potential to persistently decrease the symptom burden and increase the quality of life of patients with IA.

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OP0160-HPR

PREFERENCES FOR TREATMENTS TO PREVENT RHEUMATOID ARTHRITIS: DISCRETE CHOICE SURVEY OF GENERAL POPULATIONS IN UNITED KINGDOM, GERMANY, AND ROMANIA

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Background: There is increasing research focus on intervention for rheumatoid arthritis (RA) at the earliest stages of disease development, including treatment to prevent RA in at-risk groups. Novel cellular therapies are in development, and the effectiveness of existing immunomodulatory agents to prevent RA in those at risk is under investigation. Quantitative evidence of likely uptake of preventive treatments, and preferences for benefits and risks of such treatments is limited.

Objectives: To quantify preferences for preventive therapies for RA.

Methods: A web-based survey (n = 2959) was administered to an age- and gender- stratified sample of adults in the general population from online survey panels in the UK, Germany, and Romania. After receiving information about RA, questions to check comprehension of background information, an introduction to the survey tasks and warm-up questions, participants were asked to imagine

that they were experiencing arthralgia (without swelling) and had positive autoantibody tests indicating a 60% chance of developing RA in the next two years. Using a discrete choice experiment with a Bayesian D-efficient design, participants were offered a series of 15 choices between no treatment and two unlabeled hypothetical treatments to lower risk of RA development. Treatments were defined by six attributes with varying levels including benefits, risks, and frequency/route of administration (Table 1). One choice task with fixed levels described treatments representative of those under investigation for RA prevention (abatacept, hydroxychloroquine, atorvastatin and tolerogenic cell-based therapy). Attribute selection and presentation was informed by previous qualitative research, ranking surveys, systematic literature review, and expert opinion. Survey design was informed by patient research partners. The survey was pre-tested during qualitative interviews and revised. A pilot of the final survey with 100 respondents was conducted to obtain priors for the final experimental design. Random parameters logit (RPL) models were used to estimate relative importance of treatment attributes and likely treatment uptake rates in each country.

Table 1. Treatment attributes and levels

Attribute	Levels
Chance of developing RA reduced from 60% to	10%; 20%; 30%; 40%
How the treatment is taken	A shallow injection under the skin A drip into the vein One or two tablets
How often the medication has to be taken	Daily Weekly Monthly Every 6 months
Chance of mild side effects	2%; 5%; 10%
Chance of a serious infection due to treatment	0%; 1%; 5%
Chance of a serious side effect that is potentially irreversible	1 in 100,000 people 20 in 100,000 people 100 in 100,000 people

Results: Across all three countries, effectiveness was the treatment attribute that had most impact on treatment choice (Figure 1). Method of administration was second most important for respondents from the UK and Romania but less important for German respondents. Risks of serious infection and serious side effects were more important determinants of treatment choice for respondents in Romania than they were in the UK and Germany. Percentage choice of fixed profiles reflecting abatacept, atorvastatin, hydroxychloroquine, tolerogenic cell-based therapy and no treatment differed across countries ($\chi^2=78.90$; $p<0.001$): 28.3%, 20.6%, 22.2% 18.5% and 10.4% respectively in the UK; 31.3%, 18.8%, 11.2%, 23.4% and 15.3% in Germany; and 27.6%, 20.5%, 15.8%, 21.7% and 14.4% in Romania.

Figure 1: Relative importance of treatment attributes stratified by country; UK (N=982), Germany (N=984) and Romania (N=993). Separate RPL models were used for each country.

Conclusion: This study suggests that effective preventive treatments for RA are acceptable to members of the general population told to assume up a 60% chance of developing RA. The relative importance of treatment attributes and likely uptake of fixed treatment profiles differed across countries. These findings are informative for the design of prevention trials, and the development of informational resources and efficient preventive strategies for those at risk of developing RA.

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