

Table S1 Included studies on vegan and plant-based dietary patterns in rheumatoid arthritis, categorized by dietary exposure type.

Disease	Author/Year	Study Design	Dietary Pattern Type	Population/Intervention	Comparator	Main Outcomes	Main Findings	Level of Evidence (GRADE)
RA	Hafström et al., 2001 [1]	RCT	Vegan (gluten-free)	66 patients – gluten-free vegan diet (12 months)	Omnivorous diet	DAS28, CRP, stiffness	↓ DAS28, ↓ CRP, improved symptoms	Low–Moderate
RA	Elkan et al., 2008 [2]	RCT	Vegan (gluten-free)	30 patients – vegan diet	Omnivorous diet	LDL, oxLDL, antibodies	↓ LDL, ↑ protective antibodies	Moderate
RA	McDougall et al., 2002 [3]	RCT	Vegan (low-fat)	24 patients – low-fat vegan diet (4 weeks)	Omnivorous diet	Pain (VAS), HAQ	↓ pain and stiffness	Low
RA	Schönenberger et al., 2021 [4]	Meta-analysis	Mixed (vegetarian + Mediterranean)	7 trials (n = 326)	Control diets	Pain, CRP, DAS28	Significant reduction; high heterogeneity	Low
RA	Hartmann et al., 2022 [5]	Post-hoc analysis	Fasting + plant-based	NutriFast trial participants	Control diet	Disease activity, nutritional behavior	Favorable effects on dietary behavior and disease activity	Moderate
RA	Hartmann et al., 2021 [6]	Post-hoc analysis/protocol-based study	Fasting + plant-based	NutriFast intervention	Control diet	Cytokines, DAS28	Improvement trends reported	Moderate

Dietary patterns were heterogeneous across studies, including strict vegan diets, plant-based diets, Mediterranean diets, and fasting-based interventions, which limits direct comparability of outcomes and may influence the interpretation of clinical effects.

Abbreviations: RA: rheumatoid arthritis; CRP: C-reactive protein; DAS28: Disease Activity Score in 28 joints; HAQ: Health Assessment Questionnaire; IL: interleukin; LDL: low-density lipoprotein; oxLDL: oxidized low-density lipoprotein; TNF- α : tumor necrosis factor alpha; RCT: randomized controlled trial; GRADE: Grading of Recommendations Assessment, Development and Evaluation.

Table S2 Included studies on vegan and plant-based dietary patterns in psoriatic arthritis, axial spondyloarthritis, gout, and fibromyalgia.

Disease	Author/Year	Study Design	Dietary Pattern Type	Population/Intervention	Comparator	Main Outcomes	Main Findings	Level of Evidence (GRADE)
PsA	Caso et al., 2020 [7]	Cross-sectional	Mediterranean (plant-based predominant)	223 patients	PREDIMED adherence	DAPSA, CRP	↓ disease activity	Low
PsA	Lewandowska et al., 2021 [8]	Case report	Whole-food plant-based (WFPB)	1 patient (18 years)	—	Clinical remission	Sustained remission	Very low
axSpA	Ahangari-Maleki et al., 2023 [9]	RCT	Plant-based + synbiotics	40 patients (12 weeks)	Placebo	IL-17, IL-23, BASDAI	↓ cytokines, ↓ BASDAI	Low
axSpA	Huber et al., 2001 [10]	Case report	Vegan	1 patient	—	Clinical symptoms	Complete remission	Very low
Gout	Chiu et al., 2020 [11]	Cohort	Vegetarian (plant-based)	12,000 adults	Omnivorous diet	Gout incidence	↓ risk (39%)	Moderate
Gout	Dalbeth et al., 2021 [12]	Narrative review	Mixed dietary patterns	Mechanistic data	—	NLRP3, urate	Mechanistic support	Moderate
Gout	Chiu et al., 2020 [11]	Cohort	Plant-based substitution	Meat replaced by plant foods	—	Hyperuricemia	↓ risk	Moderate
Fibromyalgia	Kaartinen et al., 2000 [13]	RCT	Vegan (raw diet)	18 patients	Omnivorous diet	FIQ, pain	Improved symptoms	Low
Fibromyalgia	Nadal-Nicolás et al., 2021 [14]	Systematic review	Vegetarian/vegan	6 studies	—	Pain, fatigue, QoL	Consistent improvement	Moderate

Dietary patterns were heterogeneous across studies, including strict vegan diets, plant-based diets, Mediterranean diets, and fasting-based interventions, which limits direct comparability of outcomes and may influence the interpretation of clinical effects.

Abbreviations: PsA: psoriatic arthritis; axSpA: axial spondyloarthritis; BASDAI: Bath Ankylosing Spondylitis Disease Activity Index; CRP: C-reactive protein; DAPSA: Disease Activity in Psoriatic Arthritis Score; FIQ: Fibromyalgia Impact Questionnaire; IL: interleukin; NLRP3: NOD-like receptor family pyrin domain containing 3 inflammasome; QoL: quality of life; RCT: randomized controlled trial; WFPB: whole-food plant-based; GRADE: Grading of Recommendations Assessment, Development and Evaluation.

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