



PATIENT FACTSHEET: Rheumatoid Arthritis & Diet

How to prevent and reverse RA with nutrition

Rheumatoid arthritis (RA) is an auto-immune condition that affects about 0.25% of the world population (1). Inflammation in the joints damages joint cartilage and bone tissue.

RA contributes to significant pain and disability, particularly in the hands and feet (2).

RA is 2 times more common in women than men. Smoking, poor dental health, poor sleep, unhealthy diets, obesity, or a family history of RA are risk factors (3). Exposure to viruses has also been implicated in the progression of RA (2).

RA can affect other organs such as skin, eyes, heart, nervous system, lungs, and blood (4). RA increases the risk of early death and other lifestyle diseases such as diabetes and cardiovascular disease (3).

Lifestyle modification, including adopting a whole food plant-based diet, lessens RA symptoms and reduces inflammation and the risk of developing other diseases (5).

A plant based diet can "substantially decrease disease activity and improve metabolic status in patients with rheumatoid arthritis".

Walrabenstein et al., 2023

What's happening inside my body?

Obesity

- Excess body fat within and around organs increases chronic inflammation (6)
- Obese individuals have a **three times greater risk** of developing RA (7)
- Being obese **reduces the effectiveness** of arthritis drug therapy (8)
- Obesity **increases the risk** of cardiovascular diseases (CVD) (3)

Plant-based diet

- **Improves RA symptoms** possibly by reduction of immuno-reactivity to food antigens (9)
- Remarkable **decrease in pain**, swollen and tender joints and inflammation (5)
- **Improves joint function** (10)
- **Decreases risk** of CVD

Microbiome

An unhealthy diet creates an unhealthy gut, with an increased abundance 'bad' bacteria such as prevotella copri (P-copri) and metabolites such as trimethylamine N-oxide (TMAO) (11).

P-copri bacteria thrive on choline and carnitine from meat, poultry, fish and eggs.

- An unbalanced gut microbiome **reduces the effectiveness** of arthritis medications
- Increases chronic inflammation
- Increases risk of CVDs

Plant-based diet

- Increases dietary fibre and production of beneficial short-chain fatty acids (SCFA)
- Increases microbiome diversity and balance
- Decreases risk of CVDs



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The Science

Epidemiological evidence

- Data from the 2017 NHANES survey found the following were associated with greater risk for RA: advanced age, regular **smoking**, **obesity**, **osteoporosis**, **diabetes**, excess to toxic levels of **supplemental vitamin A** intake, and inadequate copper intake (7).
- You are up to **3 times more likely** to develop polyarthritis if you eat **red meat** (1.9 times), **meat and meat products combined** (2.3 times) or **excess protein** (2.9 times) (12).

Evidence From RCTs and corresponding meta-analyses

- The Plants For Joints trial compared RA patients eating a whole food plant-based diet to usual care (no dietary change) over sixteen weeks. Those on the **plant-based intervention improved their Disease Activity Score (DAS28) by 26%** (3.90 to 2.88). In addition, those on the intervention **improved inflammation markers, glucose control, cholesterol, BMI and blood pressure** (13).
- Just 4 weeks on a **vegan diet significantly decreases inflammation**, compared with a controlled omnivorous diet (14).

What to Eat



Maximise the intake of high-quality **whole plant foods** such as **vegetables, whole grains, legumes, fruits, nuts, seeds, herbs, and spices**; your health will benefit from every step towards more whole plant foods.



Choose healthy **omega-3 fat** sources such as **walnuts, flax and chia seeds**.



The fibre in **whole-grain** bread and pasta, quinoa, oats, and brown and wild rice increases your gut **microbiome diversity**. Some people see improvements in RA by **eliminating gluten** (9).



Fight chronic **inflammation** with powerful antioxidants in **berries, cruciferous vegetables (like broccoli), dark green leafy vegetables, and beans**.

Make sure to cover potentially critical nutrients with a wide variety of plant foods, enriched foods/drinks, or supplements (especially vitamin B12 and vitamin D).

What to Avoid



Avoid refined carbohydrates such as bakery items and snack foods.



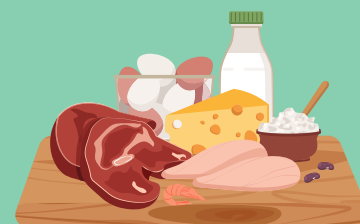
Eliminate or limit all processed foods, and sugar-sweetened foods and beverages (15).



Eliminate red and processed meat products such as **burgers, sausages, bacon, ham, salami, dried meat, canned meat, and pastrami** (16).



Eliminate or limit other animal products such as poultry, fish, eggs, cheese, and dairy.



Avoid saturated fats, from both animal and plant sources as much as possible.



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