

HEALING ARTHRITIS AND PSORIASIS  
BY RESTORING THE MICROBIOME

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# THE KEYSTONE APPROACH



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REBECCA FETT

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## PUTTING IT ALL TOGETHER

### The Basic Plan

If you suffer from any form of autoimmune disease, there is a small set of fundamental dietary changes and supplements that can produce an immense payoff when it comes to calming inflammation. These basic steps are the most critical for shifting the balancing of species in the microbiome, healing the gut barrier, and giving the immune system the healthy fats it needs to return to a normal equilibrium.

#### Diet

- Start by focusing on what you should be eating more of: **high-fiber and antioxidant-rich vegetables, fish, poultry, lean meat, and olive oil**. These foods should be the foundation of most meals.
- Adopt the **Level 1 low-starch diet** by removing gluten-containing grains, corn, soy, peanuts, quinoa, and potatoes. Limit other starches to two servings per day (preferably rice, legumes, or starchy vegetables).

- Cut back on added sugar.
- Try to space meals four hours apart with no snacking, to allow time for the digestive system to perform its important cleaning cycle.

### Supplements

- To help support the levels of other anti-inflammatory resident microbes, suppress harmful bacteria, and heal the gut, start taking a **Level 1 probiotic** with breakfast each day. Look for a product that includes *L. rhamnosus* GG (e.g., Culturelle) or *B. infantis*, *B. breve*, or *B. longum* (e.g., Jarro-dophilus Allergen-Free, Klaire Ther-Biotic Metabolic Formula). Take the probiotic with breakfast each day.
- Consider adding a vitamin D supplement containing at least 2000 IU of vitamin D3 (cholecalciferol) in an oil-based liquid or soft-gel. You may need a short-term treatment with a higher dose, such as 5000 IU per day, if you are deficient.
- On days that you do not eat oily fish such as salmon, sardines, or mackerel, add a fish oil supplement containing at least 2 grams of DHA and EPA.

### Beyond the Basics

To go further and address more specific root causes of autoimmunity, it is helpful to tailor the approach to your particular autoimmune condition. To that end, intermediate and advanced diet and supplement plans are provided below

for psoriasis, psoriatic arthritis, rheumatoid arthritis, and ankylosing spondylitis.

If budget permits, it may also be useful to pursue laboratory testing to guide the next steps in your personalized program. The most helpful tests are (in order of priority)

- a stool test to detect overgrowth of specific pathogens
- a breath test to detect SIBO
- a blood test for IgE-based food allergy and IgG-based food sensitivity

Depending on where you live, you may be able to order these tests yourself, or you may need the assistance of a functional medicine physician. (See [www.keystonebook.com/testing](http://www.keystonebook.com/testing).)

Laboratory testing is not always reliable, however, and it is certainly not required. We can instead look to the factors that are most likely to be at play in a given autoimmune disease to guide our plan of attack. In doing so, we are effectively relying on the body of scientific research to identify the most likely root causes.

### **Psoriasis and PsA—Intermediate and Advanced Plans**

If you have psoriasis or psoriatic arthritis (PsA), the basic plan above will provide the most important groundwork for healing, but there are additional steps you can take that focus on the unique issues and contributing factors that are more likely to play a role in psoriasis than other autoimmune conditions. These potential contributing factors include small intestinal bacterial overgrowth (SIBO), *Candida* yeast, and

*Streptococcus* bacteria, whether in the gastrointestinal tract or in the form of chronic low-level throat infection.

Note that individuals with psoriatic arthritis that impacts the spine and sacroiliac joints may benefit the most from reducing or eliminating starch, because this form is closely related to ankylosing spondylitis and has a clearer link to the harmful bacteria that thrive on starch.

### **Psoriasis/PsA Diet—Intermediate**

- The foundation of your diet should be high-fiber and antioxidant-rich vegetables, fish, poultry, lean meat, and olive oil.
- To combat SIBO and *Streptococcus* overgrowth, adopt the **level 2 low-starch diet**, which eliminates grains, legumes, and very starchy vegetables. Minimize high-fructose fruits, added sugars, dairy, and very starchy nuts and seeds.

### **Psoriasis/PsA Diet—Advanced**

- Experiment with the **level 3 low-starch diet** for at least three months and then try to gradually return to the intermediate low-starch diet to determine your tolerance for starches. If psoriatic arthritis impacts your spine or sacroiliac joints, you may benefit from keeping starch very low for an even longer period of time.
- For at least one month, eliminate **nightshades, nuts, eggs, dairy**, and any other foods that test positive for an allergy or IgG-based sensitivity. Systematically reintroduce these foods one at a time to find out how they affect you.

- For further troubleshooting, another possible culprit to investigate is fruit. Some individuals may feel better avoiding fruit entirely and following a very low-carbohydrate diet. This diet can be ketogenic but does not need to be if protein intake is increased to meet energy demands.

### Psoriasis/PsA Supplements—Intermediate

In addition to the vitamin D and fish oil recommended for the basic level above, consider adding the following supplements:

- A **Level 2 probiotic** such as a high potency *Bifidobacteria* combination containing multiple strains and including *B. bifidum* (e.g., Jarrow Bifidus Balance, GutPro, Renew Life 50 Plus).
- If you are prone to throat infections or tonsillitis, add a probiotic lozenge containing *S. salivarius K12*, such as HyperBiotics ProDental.
- If you suspect SIBO, consider adding further supplements to support the digestion and cleansing cycle. This may include bile and a combination of betaine HCL, pepsin, and pancreatin with larger meals and Iberogast between meals.

### Psoriasis/PsA Supplements—Advanced

- To reduce excess *Candida*, *Streptococcus*, and other harmful bacteria in the small intestine, follow a short-term pathogen-fighting protocol for 30 days. This includes a **Level 3 probiotic** (BioK+, Mutaflor, *S. boulardii*), taken before bed

each day, along with **lactoferrin**, **allicin**, and **berberine** half an hour before meals.

- To combat SIBO, consider adding supplements to support the digestion and cleansing cycle. This may include bile and a combination of betaine HCL, pepsin, and pancreatin with larger meals and Iberogast between meals.
- For additional long-term anti-inflammatory maintenance, consider supplementing with **Borage oil** or curcumin in the form of **Meriva**.

### **Rheumatoid Arthritis—Intermediate and Advanced Plans**

If you have rheumatoid arthritis (RA), it is particularly helpful to adopt the core tenets of the Mediterranean diet. Clinical studies show that RA often responds quite well to dietary changes such as increasing the consumption of fish, olive oil, and antioxidant-rich vegetables. From that point you can begin to explore whether your inflammation may be influenced by food allergy, an overgrowth of bacteria such as *Proteus mirabilis*, or a combination of factors.

#### **Rheumatoid Arthritis Diet—Intermediate**

- Start by focusing on what you should be eating more of: **high-fiber and antioxidant-rich vegetables, fish, poultry, lean meat, and olive oil**. These foods should be the foundation of most meals.
- Adopt the **level 1 low-starch diet** by removing gluten-containing grains, corn, soy, peanuts, quinoa, and potatoes. Limit other starches to

two servings per day (preferably rice, legumes, or starchy vegetables).

- Avoid sugar.
- Try to space meals four hours apart with no snacking, to allow time for the digestive system to perform its important cleaning cycle.

### **Rheumatoid Arthritis Diet—Advanced**

- For at least one month, eliminate **nightshades, nuts, eggs, dairy**, and any other foods that test positive for an allergy or IgG-based sensitivity. Systematically reintroduce these foods one at a time to find out how they affect you.
- Consider experimenting with the **level 2 low-starch diet** for three months, to determine whether you may be sensitive to starch and other carbohydrates.

### **Rheumatoid Arthritis Supplements—Intermediate**

In addition to the vitamin D and fish oil recommended for the basic level above, consider adding the following supplements:

- **Level 2 probiotic** such as a more potent *Bifidobacteria* combination containing multiple strains and including *B. bifidum* (e.g., Jarrow Bifidus Balance, GutPro, Renew Life 50 Plus).
- If you suspect SIBO, further supplements to support the digestion and cleansing cycle may be helpful. This can include bile and a combination



of Betaine HCL, pepsin, and pancreatin with larger meals and Iberogast between meals.

### **Rheumatoid Arthritis Supplements—Advanced**

- Consider following a short-term pathogen-fighting protocol for one month to target pathogens implicated in RA, such as *Proteus mirabilis*. This includes a **Level 3 probiotic** (BioK+, Mutaflor, *S. boulardii*), taken before bed each day, along with **lactoferrin**, **allicin**, and **berberine** half an hour before meals.
- When additional pain relief is needed, consider supplementing with turmeric in the form of **Meriva**.
- A **glucosamine** supplement may help prevent further cartilage deterioration in the long term.

### **Ankylosing Spondylitis— Intermediate and Advanced Plans**

If you have ankylosing spondylitis (AS), you have the most to gain from a stricter approach to starch and sugars. The low-starch diet has a long history of successfully treating many patients with AS, and there is substantial evidence that this condition is driven by the immune response to starch-loving bacteria, such as *Klebsiella* and adherent-invasive *E. coli*. Because overgrowths of these bacteria often occur in the form of SIBO, you may also benefit from strategies that reduce the overall bacterial population in the small intestine.

### AS Diet—Intermediate

- The foundation of your diet should be **high-fiber and antioxidant-rich vegetables, fish, poultry, lean meat, and olive oil**.
- Start with the **level 3 low-starch diet** for several months to find out how starch impacts your symptoms. If you experience a significant reduction in inflammation, at that point you can gradually introduce additional fruits and vegetables from the intermediate level to determine your tolerance.
- If you continue to have active inflammation even on the advanced low-starch diet, it may just be that more time is required to see a benefit. Dr. Ebringer reports that from his three decades of experience treating AS with a low-starch diet, “it normally takes around six to eight months for the diet to show its effects.”<sup>500</sup>

### AS Diet—Advanced

- Continued inflammation on the advanced low-starch diet may also be due to a food sensitivity. For at least one month, eliminate **nightshades, nuts, eggs, and dairy** and then reintroduce each food individually to gauge your reaction.
- For further troubleshooting, another possible culprit to investigate is fruit. Some individuals with AS feel better avoiding fruit entirely and following a very low carbohydrate diet. This diet can be ketogenic but does not need to be if protein intake is increased to meet energy demands.

### AS Supplements—Intermediate

- Consider a **Level 2 probiotic** such as a more potent *Bifidobacteria* combination containing multiple strains and including *B. bifidum* (e.g., Jarrow Bifidus Balance, GutPro, Renew Life 50 Plus).
- Given that *Klebsiella* and *E. coli* overgrowths can take the form of SIBO, consider adding further supplements to support the digestion and cleansing cycle. This may include bile and a combination of Betaine HCL, pepsin, and pancreatin with larger meals and Iberogast between meals.

### AS Supplements—Advanced

- To combat *E. coli* and *Klebsiella*, follow a short-term pathogen-fighting protocol for one or two months. This consists of a **Level 3 probiotic** (Mutaflor is the preferred option for AS) taken before bed each day, along with **lactoferrin**, **berberine**, and **allicin** taken half an hour before meals. Mutaflor can also be continued longer term if needed.
- For additional anti-inflammatory maintenance or pain relief, consider supplementing with curcumin in the form of **Meriva**.