## WellTheory



## Natural Rheumatoid Arthritis Pain Management

FROM THE
WellTheory Care Team



## How To Live With RA

Rheumatoid arthritis (RA) is an autoimmune disease that causes inflammation and swelling, pain, stiffness, and reduced functionality in previously healthy joint tissue. Your RA may not always affect your daily life, but flares happen and can slow you down. In addition to your health care provider's treatment plan for you, knowing how to manage your RA symptoms can help ease the discomfort of this disease. Read on to find out how you can work on daily diet and lifestyle habits to live confidently with your autoimmune diagnosis. (Source)



# What Triggers Inflammation in Rheumatoid Arthritis?

Rheumatoid arthritis, much like other autoimmune diseases, begins in the body long before signs and symptoms of inflammation become noticeable. Though it is not crystal clear where the inflammation begins, studies have shown that the health of mucosal linings in the mouth, lungs, and gastrointestinal tract plays a role. Genes and environmental triggers for disease eventually impact hormones, infections, and aging, all of which are affected by the health of your gut microbiome. (Source, Source)



## Gut Microbiome and RA

Gut bacteria are responsible for hosting a large percentage of your immune system, which determines your body's response to invading pathogens. An ideal gut environment should be ever-changing with diverse bacteria, fungi, viruses, and microbes to harmoniously harbor good health and protect you from infectious pathogens. However, factors such as poor diet, stress, and antibiotic overuse may increase permeability of the gut lining, which may be detrimental to whole body health and even increase the risk of developing an autoimmune disease. Thriving gut health is a huge piece of the puzzle to living well with this disease. Strategic dietary and lifestyle changes made at any time can impact your health enormously. (Source)

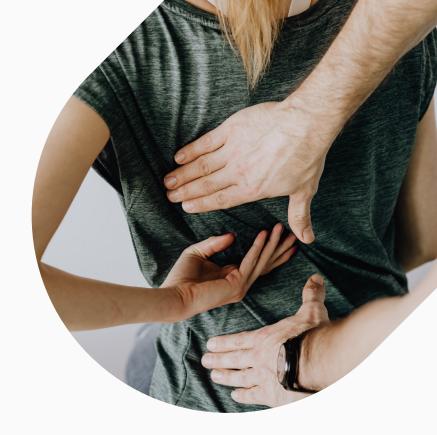
Research has shown that the presence of specific bacterial strains in the gut may be an indicating factor of developing RA. In one study, mice that were colonized with *Subdoligranulum didolesgii* showed immune responses and joint swelling similar to patients who suffer from rheumatoid arthritis. A follow up study found S. didolesgii in the gut microbiome of 20% of people already diagnosed with or at risk of developing RA. The results of this study showed that S. didolesgii, as well as strains from the Lachnospiraceae and Ruminococcaceae families, may activate immune responses that trigger the development of RA antibodies in humans, increasing the risk of developing this rheumatic condition. A healthy gut microbiota, which is so important in lowering the risk of chronic disease, can be nurtured through diet and lifestyle (Source, Source)



## Why Is RA So Painful?

You may be wondering why RA is so incredibly painful, and how it is possible to manage the pain long term. Symptom management all boils down to controlling and reducing your body's response to the excess inflammation that causes painful and swollen joints and joint damage, and reduces quality of life.

Rheumatoid arthritis may affect your overall daily life functionality due to the effect it has on the joints of the hands, wrists, feet, elbows, shoulders, neck, knees, and hips. Over time receptors in the central nervous system may increasingly react to the overstimulation of pain in the joints, causing increased sensitivity and intolerance. Research has shown that even with anti-rheumatic medication, patients may still face fair amounts of discomfort. Many people with RA find that working on an anti-inflammatory diet and lifestyle habits can help manage their condition. (Source)



## Managing Pain from RA

If you have rheumatoid arthritis, you may be able to reduce systemic inflammation and manage symptoms by altering what you are <u>eating</u>. Anti-inflammatory foods may boost your immune system and nourish a healthy digestive tract full of thriving bacteria, a good start in controlling arthritic pain and swelling and protecting joint function. In addition to treatment with disease-modifying antirheumatic drugs, you may be able to manage RA pain by establishing a diet plan with proper supplementation and by reducing your stress, ditching poor health habits that slow progress, and being aware of your physical boundaries.

#### Anti-Inflammatory Foods

Diet, in conjunction with complementary management options, is one of the most affordable and convenient means you have to manage chronic disease. Genetic predisposition and development of autoantibodies are thought to be 50% responsible for onset of RA, while environmental factors, such as diet, are responsible for the other half. The health of your gut microbiome comes back to what you're eating and how you're living, so read on to find out which foods have been studied to show improvement of symptoms, and which foods to avoid. (Source)



#### 01 Berries

A study reported in Arthritis Care Research found that participants who reported their RA symptoms were affected by the foods they ate found blueberries to be particularly beneficial. Including fresh or frozen organic berries in a smoothie or on top of a salad each day is an easy and tasty way to get your servings in! (Source)



#### 02 Fish

Consuming fatty fish such as salmon, mackerel, and tuna a few times a week may help reduce overall inflammation and pain. If you can't stomach fish, consider a fish oil supplement.

Although supplements will not provide the same benefits and nutrients as eating fish itself, they have the potential to help reduce inflammation levels because they are high in omega-3 fatty acids. (Source, Source)



#### 03 Green Vegetables

Color is key when it comes to choosing vegetables, but it doesn't get any better than the dark green and leafy vegetables such as spinach, kale, swiss chard, bok choy, broccoli, and Brussels sprouts. The cruciferous vegetables of the bunch — broccoli, brussels sprouts, and bok choy — contain a natural compound called sulforaphane, which has been shown to block inflammation and may help prevent RA developing in the first place. Dark and leafy green vegetables are also valuable sources of vitamins E and C, which may reduce inflammation and build up collagen for strong cartilage and joint flexibility. Include any of these vegetables in a daily salad, smoothie, or green juice. (Source, Source, Source)

#### 04 Foods to Avoid

Avoiding any of the following foods that may cause inflammation is recommended:



Processed, refined, and packaged foods: These include but are not limited to bread, cereal, pasta, doughnuts, cookies, breakfast bars, candy, fast foods, and frozen or microwaveable meals. These foods may contain gluten (in wheat, barley, and rye) that are thought by some to damage the gut lining and microbiota even if you are not gluten sensitive. Additives often found in these convenience foods are also thought to break down the gut barrier.



Dairy: Most dairy products contain casein, a protein that has been found to promote inflammation.



Fatty foods: Trans fats found in processed, fried, and fast foods damage your health, but consuming healthy fats found in avocados, olive oil, nuts, and fish promote good health.



Refined sugars: These are found in sugary drinks and sodas as well as packaged and processed snacks and meals, candy, and other sweet treats.



Any foods that you know you are sensitive or allergic to should be avoided even if they are whole foods. Nightshades are a group of foods that includes tomatoes, eggplant, potatoes, and peppers that are eliminated in the first phase of the autoimmune protocol (AIP) diet. Some notice avoiding these foods makes a noticeable difference in symptoms, whereas others do not notice any changes. Keep track of your symptoms when consuming these foods and avoid them if needed.

Many participants of a large RA study reported increased rheumatic symptoms after consuming some of the foods categorized above. Most foods that are packaged and processed are stripped of nutrients and are high in sugar and fat, producing an environment ripe for breeding inflammation and chronic disease.

(Source, Source, Source)

## Supplements to Fight Inflammation

Supplements can be great additions to a healthy diet and lifestyle plan, but must be taken correctly so as not to cause further issues or interact with medications you are taking. Talk to your health care provider about which supplements might be best for you. The following are supplements that have been studied specifically in patients with rheumatoid arthritis.



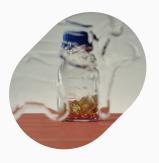
#### Omega-3 Fatty Acids

Omega-3 fatty acids are found in fatty fish such as salmon, mackerel, and tuna, and can also be taken in supplement form for extra nutrition (or if you don't enjoy seafood). Diets high in omega-3 fatty acids have been shown to improve pain levels in those with RA, and may even reduce the risk of developing the condition. A study done in 2017 found participants to have improved pain tolerance with use of omega-3s with little to no side effects. There are many brands and combinations of fish oil, so consult with your provider before choosing a supplement. These supplements may not be right for you if you are allergic to fish or shellfish. (Source, Source, Source)



#### 02 Probiotics

Probiotics can help keep your gut bacteria balanced, providing a more stable internal environment to keep your immune system and overall health thriving. There have been studies done specifically on RA sufferers and the use of probiotics but the results were varied, possibly because differing bacterial strains were used. There are many strains of probiotics that can be helpful to manage specific conditions and improve gut health, so it is best to talk to your provider about which strains might help keep your RA manageable. Most probiotics don't cause side effects, but you could experience some mild digestive upset. (Source)



## O3 Additional Supplementation

Additional dietary supplement studies have been done on:

- Thunder god vine (Tripterygium wilfordii)
- Cat's claw
- Deer or elk antler velvet
- Feverfew
- Flaxseed oil
- Green-lipped mussel
- Rose hip
- Willow bark extract

Due to little research and possible side effects, there's no conclusive evidence that these help manage RA, although future studies may be more promising! (Source)



## **Managing Stress**

Managing your <u>stress</u> on a consistent basis is key to reducing your risk of developing chronic diseases, but what if you have already been diagnosed? Stress management is just as important to living well with your diagnosis as it is to prevention! Working from the inside out to control inflammation through diet and lifestyle is a good start. When cleaning up your habits try to ditch alcohol and smoking, too. Alcohol, one of the most widely abused and addictive substances, wreaks havoc on the immune system, gut lining, and microbiota, while smoking increases the risk of developing RA and the severity of it as well. (Source, Source)

Oftentimes we turn to poor habits as a crutch to get through the moment, but the truth is that these habits can reduce your quality and quantity of life, making you feel worse in the long-term. Instead check out our list of healthy hobbies that can help occupy your time and mind!

#### Engage in Healthy Hobbies

- · Sign up for a class on a topic you're interested in
- Practice daily breathing exercises and mindfulness
- Take social media breaks
- Get outdoors each day

These are all great ways to reduce stress and chronic inflammation overall. Making time and providing opportunities to unwind may help you manage pain and other accompanying symptoms of RA. (Source)



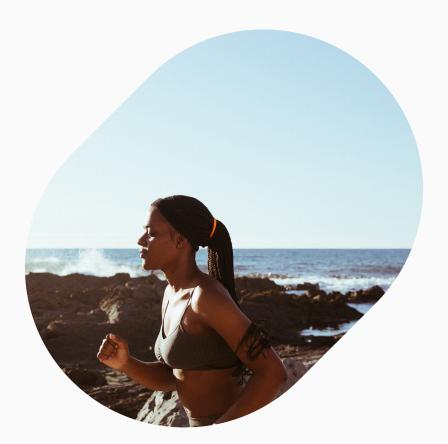
## Exercise

Exercise, or daily movement, is an approach to health everyone should be taking, but if you have a rheumatic disease physical activity can make a huge difference in how your body functions. Whether you work with a physical therapist, a personal trainer, or have the know-how to teach yourself, the right movement is beneficial for joint health. The benefits of proper stretching, strength training, and cardiovascular exercise include reducing inflammation, pain, and fatigue, while increasing resilience, energy, and functionality. (Source, Source)

Slow, deliberate movements that do not tax or overburden the body, such as tai chi and yoga, may be smart movement for those with RA.

- Tai chi is a traditional form of a Chinese martial art that combines slow movement and mental focus to restore balance, increase range of motion, and provide enjoyment.
- The practice of yoga has been used to improve mental and physical health while reducing pain, increasing flexibility, and restoring functionality.

Classes can be found online for both of these gentle physical activities, and in-person classes may be offered near you as well. (Source, Source)



## **Alternative Practices**

Alternative methods of pain management may provide relief from flares and pain, as well as helping manage stress. These methods include the Ayurvedic practices of massage and acupuncture.

- Massage has been shown to increase grip strength in those with loss of function in their hands,
   wrists, arms, and shoulders, and is a great stress buster.
- Acupuncture can be helpful in managing pain and inflammation, while boosting immune function.

Find an experienced alternative medicine practitioner to work with as you explore how to best manage your RA. (Source, Source)





## The Bottom Line on Rheumatoid Arthritis Pain Management

There is no cure for rheumatoid arthritis, but it is possible to manage symptoms and slow down the progression of the disease. Here's how you can allow your body the time and space it needs to heal:

- Utilize a food-first approach along with lifestyle hacks such as following an anti-inflammatory diet
- Add in supplements as necessary
- Manage stress
- Engage in appropriate movement each day
- Plan daily tasks around what your body can handle can improve your quality of life with rheumatoid arthritis

There will always be flares that come and go with autoimmune diseases, but following a whole foods diet and holistic lifestyle paired with your health care provider's care plan, will better help you manage your chronic pain and enjoy daily activities on a regular basis. To be confident your plan is suited to fit your unique needs, connect with WellTheory's Care Team and get a nutrition and lifestyle plan personalized to you.

#### References

American Association for the Advancement of Science. Cariz, J. (2022, October 29). Gut bacteria can trigger rheumatoid arthritis, patient study suggests.

https://www.aaas.org/news/gut-bacteria-can-trigger-rheumatoid-arthritis-patient-study-suggests

Arthritis Foundation. (n.d.). How nightshades affect arthritis.

https://www.arthritis.org/health-wellness/healthy-living/nutrition/anti-inflammatory/how-nightshades-affect-arthritis

Azizov, V., & Zaiss, M. M. (2021). Alcohol consumption in rheumatoid arthritis: A path through the immune system. *Nutrients*, *13*(4), 1324. https://doi.org/10.3390/nu13041324

Belkaid, Y., & Hand, T. W. (2014). Role of the microbiota in immunity and inflammation. *Cell, 157*(1), 121–141. https://doi.org/10.1016/j.cell.2014.03.011

Chou, P. C., & Chu, H. Y. (2018). Clinical efficacy of acupuncture on rheumatoid arthritis and associated mechanisms: A systemic review. *Evidence-Based Complementary and Alternative Medicine, 2018*, Article 8596918. <a href="https://doi.org/10.1155/2018/8596918">https://doi.org/10.1155/2018/8596918</a>

Cooney, J. K., Law, R. J., Matschke, V., Lemmey, A. B., Moore, J. P., Ahmad, Y., Jones, J. G., Maddison, P., & Thom, J. M. (2011). Benefits of exercise in rheumatoid arthritis. *Journal of Aging Research*, 2011, Article 681640. https://doi.org/10.4061/2011/681640

Fuhrman J. (2018). The hidden dangers of fast and processed food. *American Journal of Lifestyle Medicine*, 12(5), 375–381. https://doi.org/10.1177/1559827618766483

Hills, R. D., Jr, Pontefract, B. A., Mishcon, H. R., Black, C. A., Sutton, S. C., & Theberge, C. R. (2019). Gut microbiome: Profound implications for diet and disease. *Nutrients*, *11*(7), 1613. <a href="https://doi.org/10.3390/nu11071613">https://doi.org/10.3390/nu11071613</a>

Khanna, S., Jaiswal, K. S., & Gupta, B. (2017). Managing rheumatoid arthritis with dietary interventions. *Frontiers in Nutrition*, *4*, 52. https://doi.org/10.3389/fnut.2017.00052

National Center for Complementary and Integrative Health. (2018, December). *Rheumatoid arthritis*: In depth. U.S. Department of Health and Human Services, National Institutes of Health. https://www.nccih.nih.gov/health/rheumatoid-arthritis-in-depth

National Institute of Arthritis and Musculoskeletal and Skin Diseases. (n.d.). Rheumatoid arthritis. U.S. Department of Health and Human Services, National Institutes of Health. https://www.niams.nih.gov/health-topics/rheumatoid-arthritis

Penn Medicine. (2018, May 30). Seven foods to help you fight arthritis. University of Pennsylvania.

<a href="https://www.pennmedicine.org/updates/blogs/musculoskeletal-and-rheumatology/2018/may/seven-foods-to-help-you-fight-arthritis">https://www.pennmedicine.org/updates/blogs/musculoskeletal-and-rheumatology/2018/may/seven-foods-to-help-you-fight-arthritis</a>

Rheumatology and Allergy Institute of Connecticut. (n.d.). 8 Inflammation-causing foods to avoid when you have arthritis.

https://www.allergyinstitute.org/blog/8-inflammation-causing-foods-to-avoid-when-you-have-arthritis

Taneja V. (2014). Arthritis susceptibility and the gut microbiome. *FEBS Letters*, 588(22), 4244–4249. https://doi.org/10.1016/j.febslet.2014.05.034

Tedeschi, S. K., Frits, M., Cui, J., Zhang, Z. Z., Mahmoud, T., Iannaccone, C., Lin, T. C., Yoshida, K., Weinblatt, M. E., Shadick, N. A., & Solomon, D. H. (2017). Diet and rheumatoid arthritis symptoms: Survey results from a rheumatoid arthritis registry. *Arthritis Care & Research*, 69(12), 1920–1925. https://doi.org/10.1002/acr.23225

Telles, S., & Singh, N. (2012). Is yoga a suitable treatment for rheumatoid arthritis: Current opinion. Open Access Journal of Sports Medicine, 3, 81–87. https://doi.org/10.2147/OAJSM.S25707

Uhlig, T., Fongen, C., Steen, E., Christie, A., & Ødegård, S. (2010). Exploring tai chi in rheumatoid arthritis: A quantitative and qualitative study. *BMC Musculoskeletal Disorders*, *11*, 43. https://doi.org/10.1186/1471-2474-11-43

Zhang, A., & Lee, Y. C. (2018). Mechanisms for joint pain in rheumatoid arthritis (RA): From cytokines to central sensitization. Current Osteoporosis Reports, 16(5), 603–610. https://doi.org/10.1007/s11914-018-0473-5

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