



Reducing Your Risk for Arthritis: The Power of Food¹

Sarah Curl, Jodi Fitzgerald, Danielle Nelson, and Jeanette Andrade²

Overview of Arthritis

Arthritis is the swelling or tenderness of the joints. One in four adults within the United States have been diagnosed with some type of arthritis: degenerative, such as osteoarthritis; inflammatory, such as rheumatoid; infectious; or metabolic (Barbour et al. 2017; CDC 2020). Arthritis can happen because of genetics and aging, but other factors, such as diet and lifestyle, may contribute to arthritis. This publication describes the modifiable factors contributing to arthritis and tips to reduce risk for arthritis.

Factors Contributing to Arthritis Weight

The more body weight you carry, the higher your risk is for developing osteoarthritis. Extra body weight puts more pressure on your joints. This causes arthritis to develop and makes the pain of arthritis worse. Losing weight reduces your risk for arthritis and improves existing arthritis pain and function (Vincent et al. 2012).

Dietary Habits

Consuming low amounts of fruits and vegetables may increase your risk for arthritis. Fruits and vegetables contain antioxidants, which reduce inflammation that occurs dependent on the arthritis type (Antinoro 2017). Additionally, methods of processing (e.g., frying, trans-fat processing, increased sugar in low-fat foods) can induce an inflammatory response in the body and potentially exacerbate an arthritis-related inflammatory condition (Weaver et al. 2014).

Lifestyle Habits

Staying active is important when you have arthritis. Diet change and exercise alone both improve arthritis pain and physical function, but the combination of both leads to large reductions in pain and improvement in quality of life (Messier et al. 2013).

Reducing Your Risk for Arthritis Start Simple

Set a goal each week to make small changes towards health, such as:

- Choose at least 1 piece of fruit daily for a week.
- Cook at least 1 meal prepared with beans, vegetables, and whole grains this week.
- Take a 15-minute walk after work this week.

Eat More Fruits, Vegetables, Beans/Lentils and Whole Grains

These foods are:

- High in vitamins, minerals, and antioxidants that help reduce swelling or tenderness in joints.
- 1. This document is FSHN20-39, one of a series of the Food Science and Human Nutrition Department, UF/IFAS Extension. Original publication date October 2020. Visit the EDIS website at https://edis.ifas.ufl.edu for the currently supported version of this publication.
- 2. Sarah Curl, graduate student, Food Science and Human Nutrition Department; Jodi Fitzgerald, MD; Danielle Nelson, MD, MPH, assistant professor and assistant medical director, University of Florida Department of Community Health and Family Medicine; and Jeanette Andrade, assistant professor and director, MS-DI program, Food Science and Human Nutrition Department; UF/IFAS Extension, Gainesville, FL 32611.

The Institute of Food and Agricultural Sciences (IFAS) is an Equal Opportunity Institution authorized to provide research, educational information and other services only to individuals and institutions that function with non-discrimination with respect to race, creed, color, religion, age, disability, sex, sexual orientation, marital status, national origin, political opinions or affiliations. For more information on obtaining other UF/IFAS Extension publications, contact your county's UF/IFAS Extension office. U.S. Department of Agriculture, UF/IFAS Extension Service, University of Florida, IFAS, Florida A & M University Cooperative Extension Program, and Boards of County Commissioners Cooperating. Nick T. Place, dean for UF/IFAS Extension.

Get Active

The food you eat is one of the most important factors affecting your arthritis, but exercise is also important to your joint health.

- Be as active as your health allows. Work towards 30 minutes of physical activity 5 days a week.
- **Start low and go slow.** Start with low-impact aerobic activities like walking, biking, swimming, or water aerobics.
- Muscle strengthening exercises include **lifting weights**, working with a resistance band, and yoga. Aim to do strengthening exercises that target all muscle groups at least 2 days per week.

Be Kind to Yourself

- Take some time for yourself every day, even if just for 10 minutes!
- Sleep for at least 7 hours per day.
- If you consume alcohol, have 1 drink or less per day for women and 2 drinks or less per day for men.
- Avoid use of and exposure to tobacco products.
- Reduce stress as much as you can.

Setting Yourself Up for Success

- Use the suggested recipes in this publication for ideas and inspiration for healthy eating.
- Start making changes with a friend or family member! It can be helpful to have support.
- Ask for help from a health professional such as a registered dietitian to help make those positive changes.

In summary, there are 4 types of arthritis—degenerative, inflammatory, infectious, and metabolic. Excessive weight increases one's risk for osteoarthritis due to the pressure on joints. Additionally, consuming more processed products and less fruits, vegetables, and whole grains contributes to an arthritis-related inflammatory response. Thus, eating healthier and being physically active for most days of the week will help one lose weight to reduce their risk for arthritis.

References

Antinoro, L. "Can Diet Improve Arthritis Symptoms?" *Harvard Health Publishing*. 2020. https://www.health.harvard.edu/nutrition/can-diet-improve-arthritis-symptoms. [Accessed 6 June 2020].

Barbour, K. E., C. G. Helmick, M. A. Boring, and T. J. Brady. 2017. "Vital Signs: Prevalence of Doctor-Diagnosed Arthritis and Arthritis-Attributable Activity Limitation — United States, 2013–2015." *Morb Mortal Wkly Rep.* 66:246–253.

CDC. 2020. "Arthritis Types | CDC." https://www.cdc.gov/ arthritis/basics/types.html [Accessed 21 May 2020].

Messier, S. P., S. L. Mihalko, C. Legault et al. 2013. "Effects of Intensive Diet and Exercise on Knee Joint Loads, Inflammation, and Clinical Outcomes Among Overweight and Obese Adults With Knee Osteoarthritis: The IDEA Randomized Clinical Trial." *JAMA* 310 (12): 1263–1273.

Navarro, S. L., E. D. Kantor, X. Song et al. 2016. "Factors Associated with Multiple Biomarkers of Systemic Inflammation." *Cancer Epidemiology, Biomarkers & Prevention* 25 (3): 521–531.

Vincent, H. K., K. Heywood, J. Connelly, and R. W. Hurley. 2012. "Obesity and Weight Loss in the Treatment and Prevention of Osteoarthritis." *PM R.* 4 (5).

Weaver, C. M., J. Dwyer, V. L. Fulgoni 3rd, et al. 2014. "Processed Foods: Contributions to Nutrition." *Am J Clin Nutr.* 99 (6): 1525–1542. doi:10.3945/ajcn.114.089284

Recipe Ideas for Lunch/Dinner Carrot, Tomato, and Spinach Quinoa Pilaf with Ground Turkey

Prep time: 20 minutes Cook time: 40 minutes Servings: 5

Ingredients

- 2 tbsp + 2 tsp olive oil
- 1 cup quinoa
- ½ onion, chopped
- 2 cups water
- 2 tbsp chicken-flavored bouillon (low-sodium preferred)
- 1 tsp ground black pepper
- 1 tsp ground thyme
- 1 carrot, chopped
- 1 tomato, chopped
- 1 cup baby spinach
- 1 lb ground turkey
- 1 14.5-ounce can low-sodium black beans, rinsed and drained

Preparation

- 1. Heat 2 teaspoons olive oil in a saucepan over medium heat; stir in onion and cook until translucent, about 5 minutes. Reduce heat to medium-low, stir quinoa in with the onion, and cook, stirring constantly, until the quinoa is lightly toasted, about 2 minutes.
- 2. Pour water into the saucepan; add bouillon granules, black pepper, and thyme. Bring the liquid to a boil, place a cover on the saucepan, reduce heat to low, and cook at a simmer until the quinoa softens, about 5 minutes.
- 3. Stir carrot into the quinoa mixture, replace cover, and continue to cook at a simmer until water is completely absorbed, about 10 more minutes.
- 4. Remove saucepan from heat. Stir tomato and baby spinach into the quinoa mixture until the spinach wilts, about 2 minutes.
- 5. Heat 2 tablespoons olive oil in large skillet over mediumhigh heat. Cook and stir turkey in the hot skillet until browned and crumbly, 5 to 7 minutes; drain and discard grease. Reduce heat to medium-low. Stir black beans in with the turkey; cook and stir until the beans are hot, 2

to 3 minutes; add the quinoa mixture, stir, and cook until heated through, about 5 minutes more.

Whole Wheat Rotini Pasta Salad

Prep time: 20 minutes Cook time: 10 minutes Servings: 6

Ingredients

- 1 12-ounce box whole wheat rotini pasta
- ¹/₄ cup apple cider vinegar
- ¹/₄ cup olive oil
- ¼ cup crumbled feta cheese, to taste
- 6 leaves fresh basil, chopped
- Black pepper to taste
- 1 bunch asparagus, trimmed and chopped
- 3 tomatoes, chopped
- 2 large carrots, chopped
- 1 bunch green onions
- 4 cloves garlic, minced

Preparation

- 1. Bring a large pot with lightly salted water to a rolling boil. Cook rotini at a boil until the pasta is cooked yet slightly firm to the bite, about 8 minutes; drain.
- 2. Rinse the pasta with cold water until completely chilled; drain completely.
- 3. While the pasta cooks, whisk the apple cider vinegar and olive oil together in a large bowl until blended. Stir feta cheese, basil, salt, and black pepper into the vinaigrette.
- 4. Fold the asparagus, tomatoes, carrots, green onions, and garlic into the vinaigrette to coat evenly.
- 5. Stir the cooled pasta into the vegetable mixture; toss until evenly mixed.

Recipe Ideas—Snack and Dessert

Sweet Potato Hummus

Prep time: 20 minutes Cook time: 45–60 minutes Servings: 20

Ingredients

- 3 sweet potatoes (medium)
- 1 15-ounce can garbanzo beans, drained (reserve liquid) and rinsed
- 2 tablespoons olive oil
- 2 tablespoons tahini
- 2 tablespoons lemon juice
- ¹/₂ tsp lemon zest
- ¼ tsp ground cumin
- ¼ tsp ground coriander
- ¼ tsp ground pepper
- Blender or food processor

Preparation

- 1. Preheat oven to 400°F. Poke holes in sweet potatoes with a fork.
- 2. Roast sweet potatoes in preheated oven until soft, about 45–50 minutes; let cool. Cut sweet potatoes in half lengthwise.
- 3. Combine garbanzo beans and olive oil in a blender or food processor and pulse several times to mash. Scoop flesh out of sweet potato peels and add to the blender; pulse to combine.
- 4. Add tahini, lemon juice, lemon zest, cumin, coriander, pepper, and salt to mixture; blend until smooth, adding reserved garbanzo bean liquid as needed to make a smooth, creamy hummus.

Healthy Chunky Monkey Ice Cream

Prep time: 5–10 minutes Cook time: 0 minutes Servings: 2

Ingredients

- 2 frozen bananas, chopped
- 1 tbsp milk
- 1 tbsp peanut butter
- ¹/₂ ounce dark chocolate, chopped

Preparation

- 1. Place chopped bananas in freezer overnight
- 2. Blend frozen bananas, milk, peanut butter, and chocolate until blender is smooth (or slightly chunky).

Use this handy grocery list for the above recipes

Fresh/Frozen Foods

- □ Asparagus
- 🗆 Bananas
- Basil, fresh
- Carrots
- □ Feta cheese
- □ Garlic
- Green onions
- □ Lemon juice and zest
- □ Milk
- □ Onion
- □ Spinach
- □ Sweet potatoes
- □ Tomatoes
- □ Turkey, ground

Bottled/Canned/Dry Goods

- □ Apple cider vinegar
- □ Black beans, low-sodium canned
- Chicken-flavored bouillon, low-sodium
- □ Dark chocolate chips
- Garbanzo beans, low-sodium canned
- □ Olive oil
- Peanut butter
- 🗆 Quinoa
- 🗆 Tahini
- □ Whole wheat pasta

From Your Pantry

- □ Black pepper, ground
- Coriander
- □ Thyme

Find more recipes at these websites:

Arthritis Foundation https://www.arthritis.org/living-with-arthritis/arthritis-diet/

MyPlate Recipe Guides https://www.choosemyplate.gov/eathealthy/budget/budget-recipes