

THE BENEFITS OF

Good Gut Health



FROM THE EXPERTS AT THE ARTHRITIS FOUNDATION

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What's Your Gut Got to Do With Arthritis?



Scientists are finding links between the gut microbiome and various diseases — including arthritis.



You might not think what happens in your digestive tract has anything to do with your joint pain. But it turns out that the gut has much more influence over the rest of the body than we might have suspected. The reason? The trillions of germs, or microorganisms, that live together in the digestive system, called the gut microbiome.

What Is a Microbiome?

Groups of microorganisms — like bacteria, viruses and fungi — and their genes make up microbiomes. The human body has several microbiomes, including on the skin, in the airways, in the mouth and in the gut.

We still have a lot to learn about microbiomes and how they work. But we know that microbiomes that have a balance of “good” and “bad” microbes, and a lot of different kinds, help keep the body working well.

In studies, mice that were bred to have no germs and no microbiomes couldn’t absorb nutrients well, so they became starved for those nutrients. Plus, their immune systems didn’t develop, leaving them more prone to diseases. Their nervous systems also didn’t work properly, making them anxious, overly active and unable to remember what they learned.

A healthy microbiome has trillions of microorganisms and includes around 10,000 types of microorganisms, each with its own genes. With all those different combinations, each person has unique microbiomes, unlike anyone else’s.

How Does a Microbiome Develop?

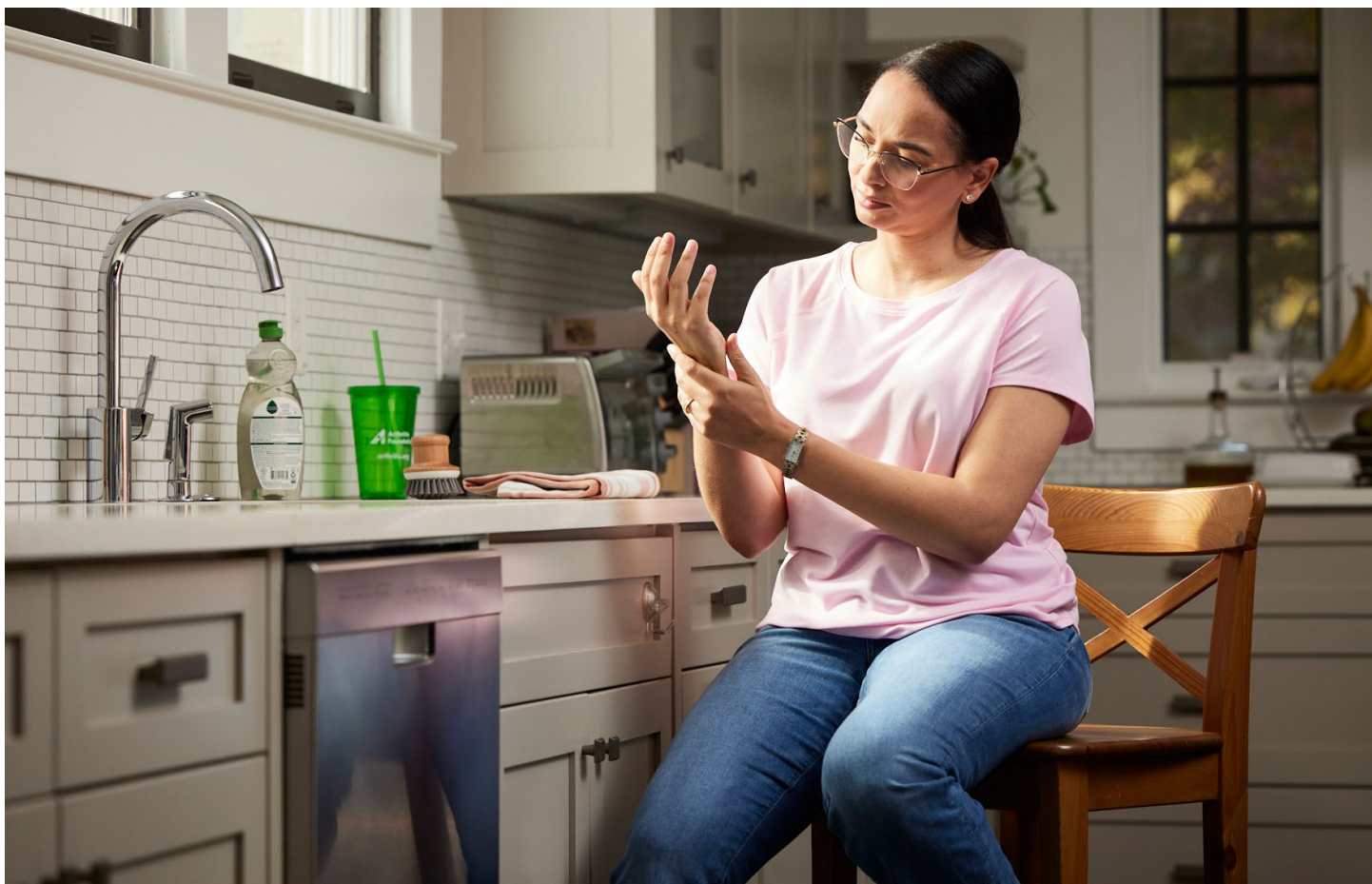
Lots of factors help shape microbiomes, beginning at birth when a baby gets microorganisms from its mother. Where someone lives, how old they are and things in the environment help shape microbiomes. What you eat, like foods and medicines, might be most important to a microbiome. For example, some foods help keep the microbiome healthy. Some medicines, like antibiotics that you take for an infection, kill microbes in the microbiome, making it unhealthy.

Each microbiome has a balance of “good” and “bad” microorganisms. We don’t know which ones are “good”

or “bad” in each person, but we do know that when there are too few types of microbes, or too many “good” or “bad” ones, then that person is more likely to get ill or develop some disease.

Scientists have found links between the gut microbiome and many different diseases, from inflammatory bowel disease to heart disease to neurological diseases, like Parkinson’s disease.

The gut microbiome also is linked to inflammatory, auto-immune forms of arthritis, including [juvenile idiopathic arthritis \(JIA\)](#), rheumatoid arthritis (RA), psoriatic arthritis (PsA), ankylosing spondylitis (AS) and systemic lupus erythematosus. ([need links here](#))



Recipe for Good Health

All the measures that keep you healthy overall will also help keep your gut microbiome healthy. That includes regular exercise, reducing stress and getting enough sleep.

Most important, though, is what you eat. A healthy eating plan that includes lots of fruits and vegetables and whole grains, like the Mediterranean diet, helps keep the gut microbiome healthy. The DASH (Dietary Approaches to Stop Hypertension) diet, which also includes more fruits, vegetables and whole grains, focuses on reducing salt. In contrast, a standard American diet — full of fats, sugars and processed foods — is a recipe for an unhealthy microbiome and for an unhealthy body. Only 1 in 10 Americans gets the recommended 1½ to 2½ cups of fruits and vegetables per day. And most Americans eat far more added sugars (the sugar that is added to a product beyond what it normally contains — like adding sugar to fruit drinks), salt and saturated fats than is healthy.

Fats, sugars and highly processed foods that most Americans eat stoke body-wide inflammation. They make the microbiome unhealthy and drive diseases like inflammatory forms of arthritis.

An eating plan like the Mediterranean or DASH diet includes whole grains, healthy fats and fruits and vegetables that are packed with fiber and lots of different kinds of nutrients. Not only are these not inflammatory, but they can also help fight inflammation. Healthy nutrients also help keep the microbiome in balance by feeding it with good bacteria and yeasts.



ELIMINATION DIET

If you think one or more foods make your arthritis pain or other symptoms worse, you might want to try an elimination diet.

- 1** Keep a journal to record what you eat and how your symptoms are.
- 2** Cut out one food you think is a problem for about two weeks. See if your symptoms change.
- 3** Repeat that for each food you suspect, one at a time.
- 4** Then add each food back, one at a time. Allow a few days between each to see how it affects your symptoms.

This can help you identify whether you are sensitive to foods and which ones affect you.

What About Probiotic Supplements?

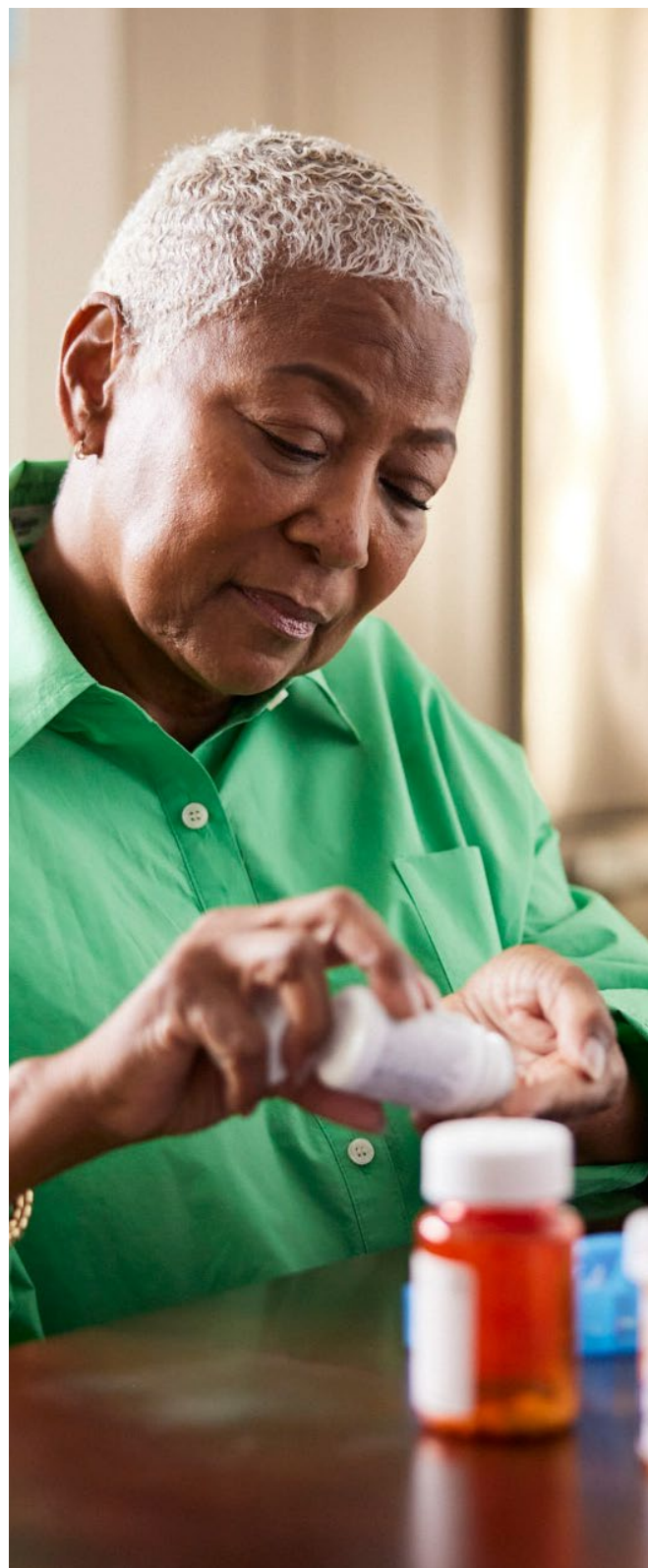
Chances are you've seen "probiotics" on food labels, heard them advertised or seen them for sale alongside vitamin supplements. But what are they? And should you try them?

Probiotics are living organisms that restore good bacteria to your gut microbiome. The best sources are from foods. For example, fermented foods like kimchi, kefir, kombucha and yogurt normally have probiotics. (Not all commercial yogurts have them. If the label says something like "live cultures," then it contains probiotics.)

Probiotic supplements are another alternative. They are generally safe, but supplements are not well regulated in the United States. Because of that, the bottle doesn't always contain what the label says. Plus, when you eat probiotic supplements, they go into the digestive tract. Stomach acids that break down foods are likely to kill the microbes, so they may not do what they're supposed to.

Perhaps most important, there isn't much evidence that probiotic supplements help fight diseases. There are only three conditions that they might help, and those are rare and not related to arthritis.

There is no evidence that they help osteoarthritis. Most studies of probiotics for rheumatoid arthritis have been small and the results are mixed. Some results did show improvements in tender joints and pain. But there isn't enough proof at this point to recommend probiotics for RA.



Diet for a Healthy Gut

The best way to a healthy microbiome seems to be eating more plant-based foods, like the Mediterranean or DASH diet. You can apply the same rules to other cultural cuisines, whether it's Asian, African or South or Central American. The point is to focus more on a plant-based diet with whole grains, nuts and seeds, legumes, healthy fats like olive oil and fatty fish, and dairy. At the same time, eat less or cut out saturated and trans fats. Those are found in lots of packaged snacks, fast foods and red and processed meats. Cut out highly processed foods with added sugars and ingredients that are hard to pronounce, too. Read labels of the foods you buy. You might be surprised



A man with grey hair, a beard, and glasses is smiling while pouring a vibrant green liquid from a blender into a clear glass. He is wearing a light blue button-down shirt. The background is a bright, modern kitchen with white cabinetry and a wooden countertop. A microwave is visible on the counter. The overall atmosphere is clean, bright, and healthy.

What To Eat For a Healthy, Anti-Inflammatory Diet



Fruits and Vegetables

How much: 1½ to 2½ cups of fruit and 2½ to 4 cups of vegetables daily for adults.*

At least half should be from whole fruits rather than juices and whole vegetables instead of sauces. (Juices are loaded with sugar, and sauces usually have added sugar and sodium plus preservatives that your body doesn't need.)

Frozen fruits and veggies are usually just as good as fresh, because the freezing process locks in nutrients that are lost as produce ages.

Make it colorful. Fruits and vegetables are packed with antioxidants and nutrients. The darker and brighter their color, whether it's blue, red, orange or green, the richer they are in antioxidants and nutrients. For example, blueberries are full of anthocyanin, an antioxidant that helps protect your cells.

RECIPES: [Green Smoothie](#), [Mediterranean Vegetables](#)



Beans, Peas and Lentils

How much: 5½ ounces of protein per day. That's the total protein you need per day from all sources. That includes not just beans, peas, lentils and other legumes, but also meats. Anything more than that from legumes counts as a vegetable.

Beans, peas, lentils, edamame and other legumes are key sources of fiber, protein, potassium and folate. (If you take methotrexate for your arthritis, you probably need more folate. Folic acid is a man-made form of folate and is available as a supplement.)

RECIPES: [Easy Homemade Lentil Hummus](#), [Cannellini Beans With Shallots and Sage](#)



Nuts and Seeds

How much: About 1 ½ ounces per day.

Tree nuts and seeds, like flaxseed and chia, are rich in filling fiber and healthy monounsaturated fats.

Tree nuts include walnuts, almonds, pine nuts, pistachios and others that grow on trees. Despite their name, peanuts are legumes that grow in the ground.

RECIPES: [Berry Chia Yogurt Bowl](#), [Fluffy Flax Pancakes](#)



Fish

How much: At least 3 to 4 ounces twice a week. Choose fish and lean poultry more often, and red and processed meats less often (or not at all).

Coldwater fish, like sardines, salmon and herring, are great sources of omega-3 fatty acids.

Be aware that some of the same types of fish also have unhealthy amounts of mercury from pollution.

RECIPES: [Grilled Wild King Salmon](#), [Faux Miso Marinated Cod](#)



Healthy Oils

How much: 2 to 3 tablespoons per day.

Olive oil is rich in omega-3 fatty acids and has anti-inflammatory properties. Walnut oil is also a good source of omega-3 fatty acids.

Tree nuts include walnuts, almonds, pine nuts, pistachios and others that grow on trees. Despite their name, peanuts are legumes that grow in the ground.

RECIPES: [Spinach, Parsley, Basil, Walnut & Pecan Pesto With Green Beans](#), [Cumin-Scented Black Bean Dip](#)



How much: 5 to 10 ounces total daily.

Whole grains, like wheat, barley, corn, brown rice and oatmeal, have important nutrients. One of them, fiber, can help you stay a healthy weight by making you feel full. It can keep your digestive tract working well and can help control your cholesterol level.

Whole grains are also good for a balanced microbiome.

Whole Grains

In processed grains, like white flour and white rice, much of the fiber and the iron and B vitamins are removed. If you choose a processed grain product, make sure it is “enriched.” That means some of those nutrients have been added back in.

Be careful of products labeled “multigrain” or “wheat.” They might not actually contain whole grains. Look for “whole grain” as the first ingredient on the label.

RECIPES: [Whole Wheat Penne With Salmon and Kale](#), [Berry Oatmeal Crisp](#)



Dairy

How much: At least 3 cups a day. 1½ ounces of cheese has a similar benefit to 1 cup of milk.

Most people should choose low- or no-fat dairy products.

Lactose-free dairy products count. So do soy-based products, as long as they are fortified (with added calcium).

RECIPES: [Easy Black Bean and Goat Cheese Enchiladas](#), [Indian Vegetable Dip](#)

*U.S. Department of Agriculture (for more information about the amounts that are right for you, visit MyPlate.gov)