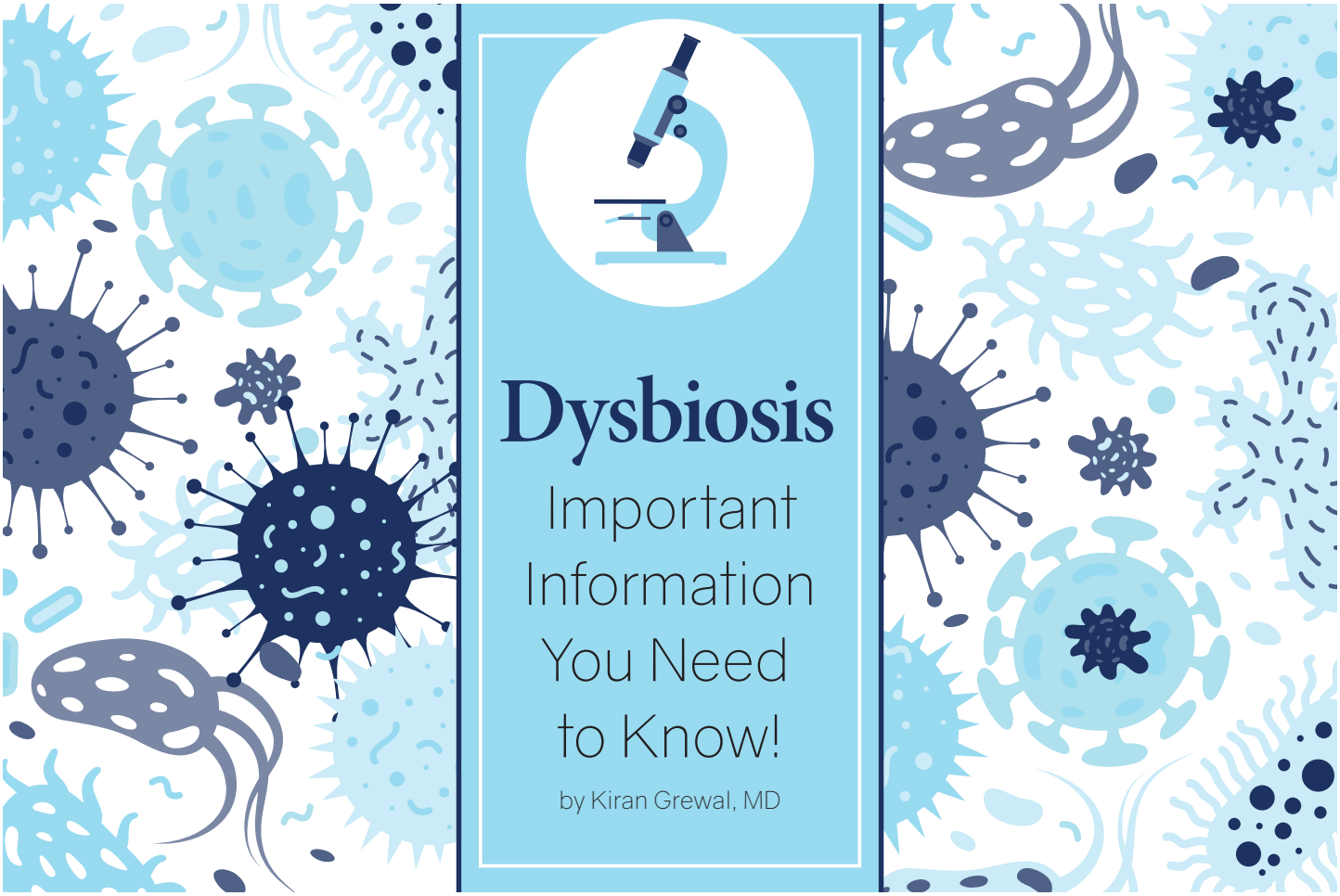

# Dysbiosis

## Important Information You Need to Know!

by Kiran Grewal, MD

Dysbiosis (say 'DIS-bi-OH-sis') is a scientific term that refers to a bacterial imbalance in the body. Most often, dysbiosis refers to an imbalance in the bacteria of your intestinal tract, however, this can also occur on any exposed surface of your body, such as your skin or mucous membranes found in the lungs, nose, vagina, ears and other areas. Most often, dysbiosis refers to a gut bacterial imbalance and that is what we will concentrate on here.

If you are like most people, you were brought up to believe that all bacteria are bad for you, and it was modern medicine's job to search out and destroy any microbial invader before it had the chance to make you ill, or at least, if you did get sick, finish off these bacterial invaders with potent antibiotics so you could recover. Only in the last few years has it become more common to hear the average person talking about 'good' bacteria, not to mention the idea that the health of your gut's bacterial colonies, or microbiome, is crucial to your health.

### What is the function of your microbiome?

Your gut is a remarkable organ as it produces three-fourths of your body's neurotransmitters; contains more than two-thirds of your body's immune tissues; has a metabolic activity greater than your liver, and houses a genome that is more than one hundred times larger than the human genome!

Your gut's bacterial microbiome is vitally important in each of these key roles, and an imbalance has the capacity to affect nearly every system in the body. Imbalance of the intestinal microbiome has also been implicated in a wide variety of human disease processes, including inflammatory bowel disease, asthma, obesity, diabetes type 2, metabolic syndrome and coronary heart disease. Dysregulation of gut microbiome can precede motor symptoms of Parkinson's disease.

The gut microbiome is also involved in the fermentation of the dietary fiber into short chain fatty acids. Short-chain fatty acids have myriad functions, both in and outside of the gastrointestinal tract. In short, the makeup of your gut bacterial microbiome can either predispose you to disease or help to shape a healthy immune response.

Imbalances in your gut microflora can be caused by a variety of factors, including the use of antibiotics, your diet, your genetic inheritance and even whether you grew up on a farm or in a city high-rise. At the Grewal Center, we use state-of-the-art labs to evaluate the activity of your gut microbes, as well as your digestion and absorption, intestinal permeability, inflammation and bacterial/ yeast overgrowth.

*Contact Dr. Grewal at Grewal Center for Mind Body Medicine, Preston Professional Plaza, 1003 High House Road, Cary, NC 27513. Phone 919-234-7169 or visit https://grewalcenter.com.*

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