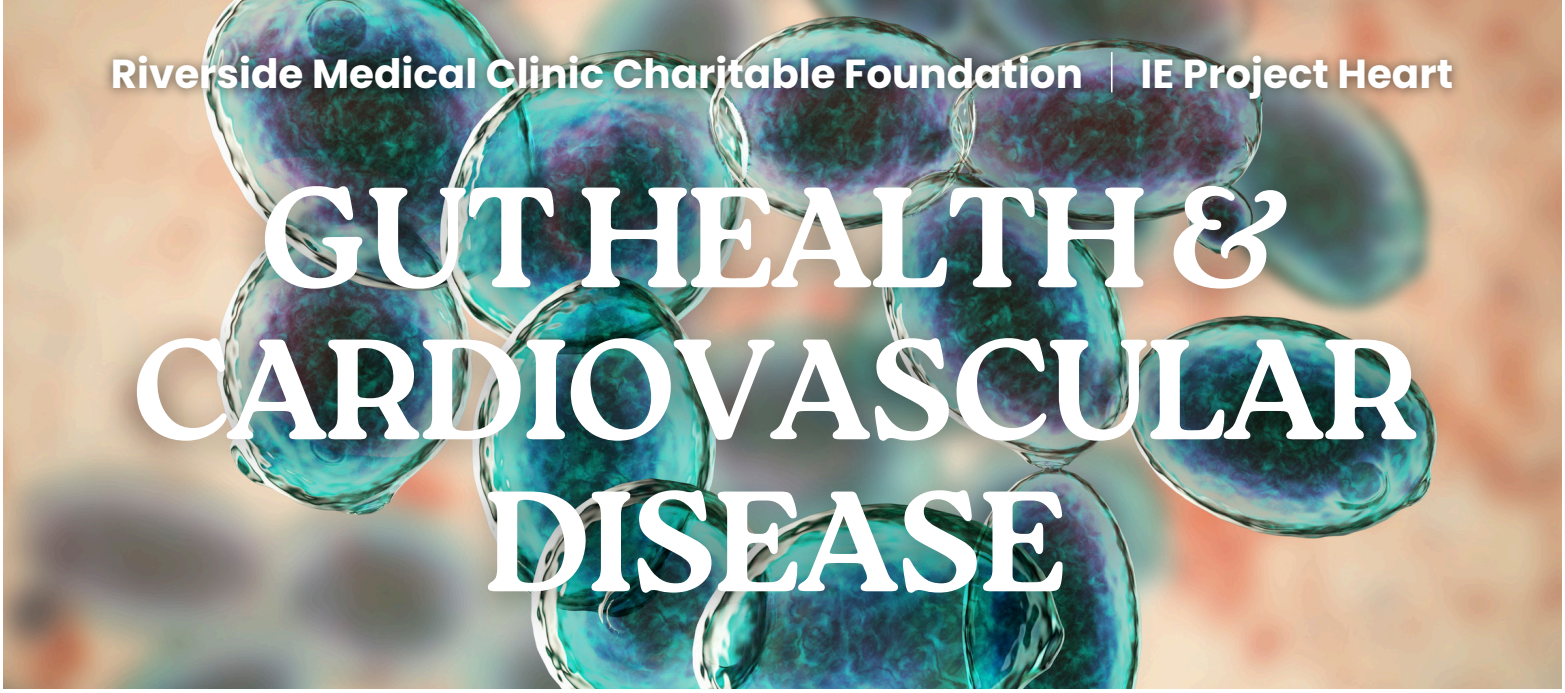

WHAT IS THE GUT MICROBIOME?

The gut microbiome refers to the unique community of bacteria that lives in your intestines. Each person has their own distinct microbiome, shaped by genetics, diet, and environment. You may have heard that microbes outnumber human cells in our bodies—while that's not entirely accurate, we do have roughly a 1:1 to 1:3 ratio of bacteria to human cells. That's an estimated 39–100 trillion microbes, with about 95% of them living in the gut!
These microbes play a vital role in maintaining our health. They help digest food, absorb nutrients, produce essential vitamins, and protect against harmful bacteria. Keeping your gut microbiome balanced is essential to staying healthy—and one of the best ways to support it is through a diet rich in gut-friendly foods.

WHAT ARE PREBIOTICS, PROBIOTICS, AND POSTBIOTICS?

Prebiotics are the nutrients that feed your gut bacteria. Just like we need nutritious food to stay healthy, so do our gut microbes. These beneficial bacteria thrive on fiber-rich foods like whole grains, fruits, vegetables, and legumes. Probiotics, on the other hand, are live, beneficial bacteria that support a healthy gut environment. They can be found in fermented foods such as yogurt with live and active cultures, kefir, kimchi, sauerkraut, miso, tempeh, certain cheeses, kombucha, and pickled vegetables. Probiotics are also available in supplement* form, but it's important to choose brands that offer clinically effective doses, transparent labeling with specific strain names, and third-party testing to ensure quality. Keep in mind that not all probiotic supplements survive the acidic environment of the stomach, so food-based sources are often more reliable. Postbiotics are the beneficial byproducts or metabolites produced when gut microbes break down prebiotic fibers. These include B vitamins, vitamin K, amino acids, short-chain fatty acids, digestive enzymes, and peptides—all of which play important roles in supporting immunity, reducing inflammation, and improving overall gut function.

THE GUT-HEART CONNECTION

Your gut and heart may seem unrelated, but they are closely connected through the gut-heart axis. While many bacterial metabolites (postbiotics) are beneficial, others can contribute to disease when produced in excess.

One example is TMAO (trimethylamine N-oxide), a compound linked to increased risk of cardiovascular disease, including atherosclerosis. TMAO is produced by certain gut bacteria that feed on nutrients like choline, carnitine, and betaine—commonly found in red meat, egg yolks, and high-fat dairy. While these foods can be part of a healthy diet in moderation, excessive intake may promote the growth of bacteria that produce harmful metabolites.

Other metabolites have been link to increased risk of high blood pressure, elevated cholesterol, and chronic inflammation. By reducing the intake of foods that fuel undesirable bacteria and increasing your consumption of prebiotics and probiotics, you can help shift your microbiome from dysbiosis (imbalance) to symbiosis (balance). Keep in mind this change is not instant, and that everyone's microbiome is unique.

HOW TO INCORPORATE PREBIOTICS AND PROBIOTICS IN OUR DIET

It's easier than you might think to support your gut:

- Start your day with yogurt (plant-based or dairy) containing "live and active cultures," and top it with fresh fruit for extra prebiotic fiber.
- Add fermented foods like kimchi, sauerkraut, tempeh, miso, and kombucha into your diet.
- Choose probiotic supplements* wisely. Look for trusted brands with transparent labeling, clinically effective doses of bacterial strains, and third-party testing. Consult your healthcare provider before beginning any new supplement.

💡 Remember: probiotics need fuel to thrive!

- That's where prebiotics come in—focus on whole food sources like:
  - Fruits and vegetables (bananas, onions, garlic, asparagus, leeks, etc.)
  - Whole grains (oats, barley, brown rice, etc.)
  - Legumes (lentils, chickpeas, black beans, etc.)
  -

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*Supplements are not a substitute for a healthy balanced diet, nor should they be treated as medical treatments for diagnosed illnesses. Obtaining probiotics and prebiotics from whole food sources is the most desirable way of incorporating them into your diet.