

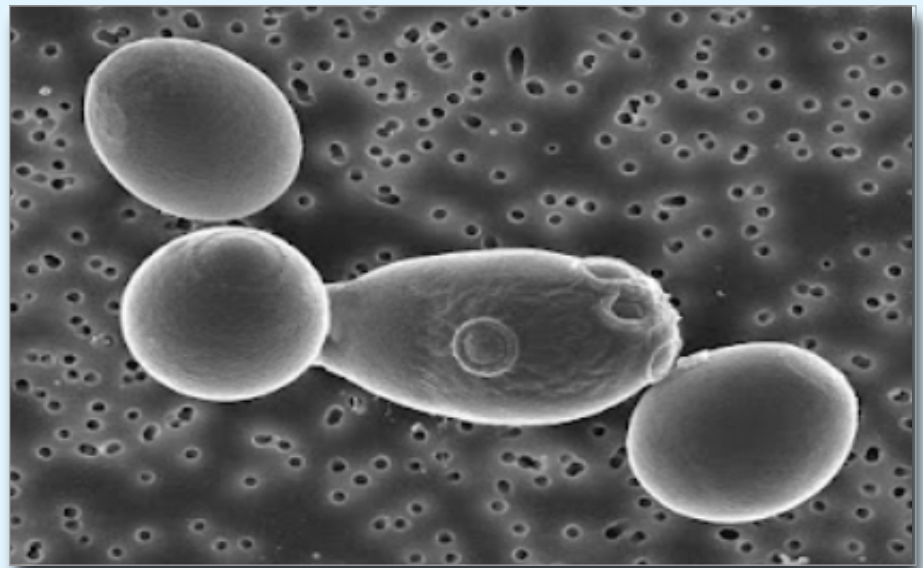
# Saccharomyces Boulardii

## The Probiotic Yeast

*"With 70-80% of the immune system living in the GI tract, it's important to stay updated to some of the players."*

Hundreds of different species of organisms live in our GI tract. I have heard estimates up to 100 trillion microbes live inside us. Among other things these microbes digest our food, make essential nutrients like vitamin K and biotin, and manufacture short chain fatty acids. At every complementary medical conference that I've attended in the last 10 years, every speaker at least mentions the importance of gut health. And with 70-80% of the immune system living in the GI tract, it's important to stay updated to some of the players.

In terms of our ability to modulate these microbes, one of the big players is *Saccharomyces boulardii*, a viable yeast that has some very interesting properties. Historically, *Saccharomyces boulardii* has been effective for treating and preventing traveler's diarrhea, antibiotic induced diarrhea as well as infectious types such as rotaviral diarrhea in children and intestinal overgrowth in adults.



As a Wellness clinician we should be aware of the fact that pharmaceutical as well as natural antibiotics kill microorganisms. And until comprehensive research clearly demonstrates that only "bad" microorganisms are killed by a particular natural antibiotic and that the "good" or "friendly" ones are left alone, it's wise to use probiotics at the end of your therapy to help build and support the friendly bacteria in your intestines.

Just as we want to limit bad bacteria we must also consider limiting the various fungal

species that normally exist in our GI tract, especially *Candida Albicans*. As you know, when you limit the healthy bacteria that keep the yeast in check with antibiotics, the yeast can proliferate at a very rapid rate. This is where *Saccharomyces boulardii* shines. This friendly yeast grows in the large bowel consuming the food and space that other pathogens normally use to gain control. The net result is that pathogens can't disrupt the eco-balance.

The beauty of *Saccharomyces boulardii* is that it achieves sat-

uration concentrations in the colon within 3 days but does not colonize in the intestinal tract. In fact *Saccharomyces boulardii* is cleared from the intestine in 2-5 days after discontinuing therapy.

*Saccharomyces boulardii* is used clinically for general digestive problems, irritable bowel syndrome, inflammatory bowel disease, including Crohn's disease and ulcerative colitis, Lyme disease, lactose intolerance, urinary tract infections, vaginal and other yeast infections, high cholesterol, hives, fever blisters, canker sores, and adolescent acne.

Let's look at some of the reasons why it may be effective for these conditions. Again there is the "food consuming and space occupying" role that *Saccharomyces boulardii* plays. But perhaps even more important is its indirect immune modulating role. The immune system is roughly broken into 2 parts, the innate or inborn fraction and the adaptive or acquired fraction. *Saccharomyces boulardii* affects the innate immunity by activating the complement system which turns on preliminary healthy inflammation, identifies and removes foreign substances, attracts phagocytes, and activates the adaptive fraction. This adaptive role goes a step further as *Saccharomyces boulardii* increases the intestinal secretion of Secretory IgA (sIgA).

"Secretory IgA is the main immunoglobulin found in mucous secretions, including tears, saliva, colostrum and secretions from the urinary tract, gastrointestinal tract, prostate and respiratory epithelium. It is also found in small amounts in blood. The secretory component of sIgA protects the immunoglobulin from being degraded by proteolytic enzymes, thus sIgA can survive in the harsh gastrointestinal tract environment and provide protection against microbes that multiply in body secretions."

Let's go a step further, all inflammatory bowel diseases such as ulcerative colitis and Crohn's disease are characterized by the perpetual production of inflammatory mediators. *Saccharomyces boulardii* secretes "soluble factors" demonstrated to down regulate inflammation by the reduction of NF-kappa B. NF-Kappa B can dramatically increase inflammation at a genetic level.

*Saccharomyces boulardii* also blocks the expression of various pro-inflammatory cytokines. It also enhances the secretion of mucosal immune factors which exert a barrier against pathogenic bacteria. Many of us know how important it is to maintain tight junctions as a protective barrier to prevent pathogens from entering the blood stream. *Saccharomyces boulardii* improves this "tight junction structure." Finally in dendritic immune cells, *Saccharomyces boulardii* increases the healthy or positive interleukin IL-10 which down regulates the TH-1 response.

*Saccharomyces boulardii* from Biotics Research Corporation is a 235 mg capsule containing a minimum of 4 billion organisms. The therapeutic dose is 1 capsule, 3 times a day. A word of caution, as yeast grow they cause flatulence. Advise patients this is a normal process and adjust dosage as needed.

So if your patients are plagued with intestinal inflammation, diarrhea, leaky gut or reduced Secretory IgA consider *Saccharomyces boulardii*. In this age of either natural or pharmaceutical antibiotics don't forget *Saccharomyces boulardii* and make sure to replace probiotics at the end of treatment.

Thanks for reading this week's edition. I will see you next Tuesday.