

Saccharomyces boulardii (Sacro-B)

Saccharomyces boulardii, or Sacro B, is an important probiotic

that can recolonize and sustain flora in the large and small intestine. Probiotics, as defined by the Food and Agricultural Organization of the United Nations, are “live microorganisms which, when administered in adequate amounts, confer a health benefit on the host.” (1)

S. boulardii is a strain of yeast, first discovered in 1920 by French biologist Henri Boulard while in southeast Asia. Boulard’s purpose for traveling to the area was to look for a strain of yeast that would be particularly heat-resistant for the production of wine. A cholera outbreak occurred during Boulard’s stay. Boulard noted that to help combat the diarrhea associated with the disease, people would either chew on the skins of lychee and mangosteen fruits, or boil the skins to make tea. He was able to isolate the particular substance that successfully stopped the diarrhea, and discovered that the yeast could grow at the unusually high temperature of 98.6 degrees Fahrenheit. (2) Determining that the yeast was of the *Saccharomyces* genus, he named his discovery after himself. In 1947, Boulard sold the rights to *Saccharomyces boulardii* to the fledgling pharmaceutical company Biocodex. The company continues to hold the patent to *S. boulardii*.



S. boulardii is classified as being non-systemic and non-pathogenic. It confines itself to the intestinal tract, instead of spreading throughout the body. It is popularly marketed in lyophilized (freeze-dried) form.

Benefits of *Saccharomyces boulardii*:

Controls Various Forms of Diarrhea

Below are applications of how *S. boulardii* is effective in not only the treatment but in the prevention of a number of diarrhea-related gastrointestinal disorders. (3)

Decreases Incidence of Acute Diarrhea

Studies conducted in 1994 and 2005 indicate that the use of *S. boulardii* versus a placebo shows efficacy in reducing acute diarrhea in children and adults. The dose administered to children age three months and older, as well as to adults, was 250 mg. twice per day for five days. (4) (5)



Reduces Rate of Recurrence of Pseudomembranous Colitis

When administered concurrently with either of the antibiotics metronidazole or vancomycin, *S. boulardii* was found to decrease the likelihood of additional episodes of pseudomembranous colitis among people experiencing the disease. (6)

Lessens Bowel Movement Frequency in Irritable Bowel Syndrome Patients

Research conducted in a series of studies shows that ingestion of *S. boulardii* significantly diminished the number of bowel movements in people with diarrhea-predominant irritable bowel syndrome. Use of *S. boulardii* also improved the texture of the stool.

Reduces Likelihood of Contracting Travelers’ Diarrhea

In 1989, a group of Austrians planning a worldwide tour participated in a study to determine the efficacy of *S. boulardii* in preventing “travelers’ diarrhea.” They ingested *S. boulardii* on a daily basis, five days prior to departing. It was found that the higher the dosage, the less likely the tourists were to develop diarrhea while experiencing food and water qualities of varying levels. It was also found that the incidence of diarrhea corresponded to the locations visited. (7) Another advantage of using *S. boulardii* during travel is that the yeast does not need to be kept as cold as some other probiotic strains.

Decreases Diarrhea as an Antibiotic Side Effect

Although the primary purpose of antibiotics is to kill infection-causing bacteria in the body, they can produce undesirable side effects like diarrhea, as well as the cramping and nausea associated with it. When used as a preventative treatment, *S. boulardii* has been shown to reduce the onset, duration and frequency of this side effect among adults. (8)

Assists in Anti-Inflammatory Protection

When the body is affected by an *Escherichia coli* (*E. coli*) infestation, the proinflammatory cytokine known as Interleukin 8 has a tendency to become secreted in the gut. The use of *S. boulardii* is seen as beneficial to prevent such secretions, reducing the severity and toxicity of the *E. coli* bacterial invasion.

Safety of *Saccharomyces boulardii*:

S. boulardii is generally well tolerated. Side effects, which are typical of many probiotics, include flatulence, bloating due to gas, constipation and increased thirst. These side effects become less pronounced with regular use of the yeast. People who are allergic to yeast should not use *S. boulardii*. The yeast should not be used in concert with anti-diarrhea medications.

References:

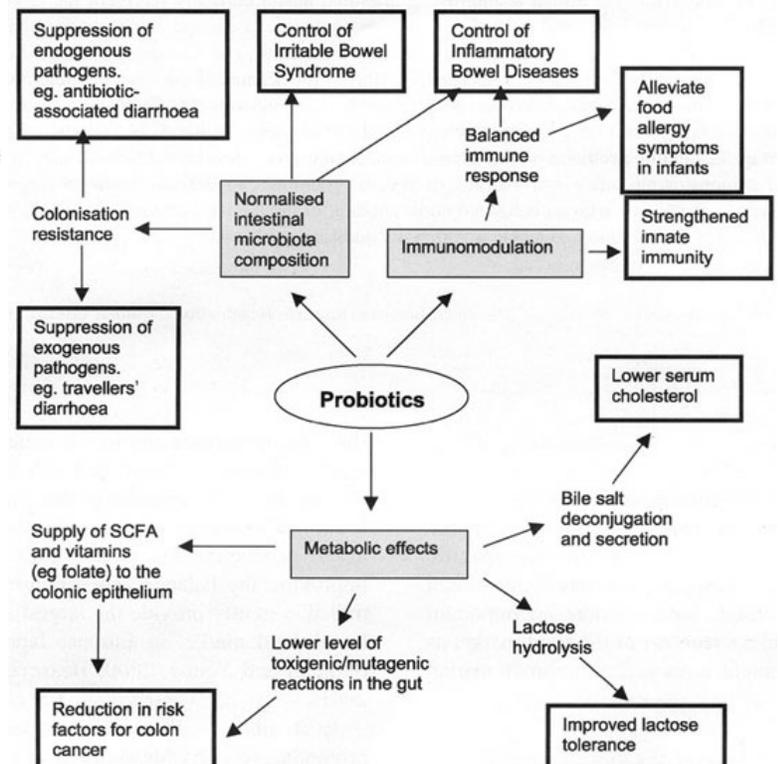
- (1) FAO/WHO: Health and Nutritional Properties of Probiotics in Food including Powder Milk with Live Lactic Acid Bacteria. Report of the Joint Food and Agriculture Organization (FAO) of the United Nations/World Health Organization (WHO) Expert Consultation on Evaluation of Health and Nutritional Properties of Probiotics in Food Including Powder Milk with Live Lactic Acid Bacteria.
- (2) McFarland L, Bernasconi P (1993). "Saccharomyces boulardii: a review of an innovative biotherapeutic agent." *Microbial Ecology in Health and Disease* 6: 157–71.
- (3) Vandenplas Y (July 1999). "Bacteria and yeasts in the treatment of acute and chronic infectious diarrhea. Part II: Yeasts." *Clinical Microbiology and Infection*. 5 (7): 389–395.
- (4) Centina-Sauri G, Sierra Basto G (1994). "Therapeutic evaluation of *Saccharomyces boulardii* in children with acute diarrhea." *Annale Pediatrie* 41: 397–400.
- (5) Kurugöl Z, Koturoğlu G (2005). "Effects of *Saccharomyces boulardii* in children with acute diarrhea." *Acta Paediatrica*. 94 (1): 44–7.
- (6) McFarland L, Surawicz C, Greenberg R (1994). "A randomised placebo-controlled trial of *Saccharomyces boulardii* in combination with standard antibiotics for *Clostridium difficile* disease." *Journal of the American Medical Association*.
- (7) Kollaritsch H, Kemsner P, Wiedermann G, Scheiner O (1989). "Prevention of traveler's diarrhoea. Comparison of different non-antibiotic preparations." *Travel Medicine International*: 9–17.
- (8) Kotowska M, Albrecht P, Szajewska H (2005). "*Saccharomyces boulardii* in the prevention of antibiotic-associated diarrhoea in children: a randomized double-blind placebo-controlled trial." *Alimentary Pharmacology & Therapeutics*. 21 (5): 583-90.
- (9) Czerucka D, Dahan S, Mograbi B, Rossi B and Rampal P (2000). "*Saccharomyces boulardii* Preserves the Barrier Function and Modulates the Signal Transduction Pathway Induced in Enteropathogenic *Escherichia coli*-Infected T84 Cells." <http://www.probiotic.org/saccharomyces-boulardii.htm>

Thorne Research makes a professional quality, hypoallergenic, *sacromyces boulardii* supplement, called Sacro-B, which I have used with great success for patients. I particularly recommend it for patients while taking antibiotics since this is a yeast form rather than a bacterial form and is able to stabilize the gut floa even in the presence of antibiotics.



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Proposed health benefits stemming from probiotic consumption.