



Probiotic Supplementation Causes Fat Loss in Overweight Adults *Study Shows Morinaga's New Probiotic Strain Bifidobacterium breve B-3 Significantly Reduces Fat Mass Compared to Placebo*

TOKYO (JUNE 24, 2015) — [Morinaga Milk Industry Co., Ltd.](#) (TOKYO:2264), the second largest dairy product company in Japan, confirmed that its new probiotic ingredient, *Bifidobacterium breve* B-3, caused a significant reduction of body fat and modified metabolic function in adults with obese tendencies in a randomized, double-blind, parallel-controlled trial.

For decades, obesity has been thought to be caused by an imbalance between energy intake and energy expenditure. However, recent evidence suggests that gut microbiota play a key role in regulating energy balance and fat storage. Accordingly, it has been suggested that manipulating the composition of the gut microbiome may be a novel approach to treating obesity and metabolic syndrome.

A previous study reported that administration of Morinaga's probiotic strain *B. breve* B-3 to mice with diet-induced obesity reduced body weight gain and visceral fat deposits and improved serum levels of total cholesterol, glucose and insulin (Kondo *et al.*, 2010).

With the collaboration of Dr. Taeko Shimoda, professor emeritus of Tokyo Healthcare University, the present study, published in the international, peer-reviewed *Journal of Nutritional Science* in May 2015, was conducted on 52 adults with moderately high body mass index (BMI:24-30 kg/m²), including diabetics.

Participants randomly received either *B. breve* B-3 or placebo by capsule for 12 weeks. At the end of the study, those taking B-3 experienced a significant decrease in body fat mass — both compared with baseline and with placebo.

“The decreased body fat mass was around 1 kg after 12 weeks, which is a very promising effect for probiotics,” stated Dr. Shimoda. “In addition, we also observed a possible improvement effect of liver function, indicated by a significant decrease of serum γ -GTP level.” Elevated levels of γ -glutamyltranspeptidase, widely used to evaluate the degree of liver injury, are correlated with higher risk of metabolic syndrome.

Characterized by elevated blood pressure, elevated blood sugar, dyslipidemia, and abdominal fat accumulation, metabolic syndrome currently affects 47 million Americans and raises the risk of cardiovascular disease, stroke and diabetes.¹

“We are excited that *B. breve* B-3 has demonstrated great potential in helping prevent metabolic syndrome, while at the same time improving liver function,” said Dr. Jin-zong Xiao, Department Manager of Morinaga's Food Science & Technology Institute. “We plan to devote additional resources toward continued investigations into *B. breve* B-3 in order to further document the efficacy of this unique probiotic strain.”

Reference

J. Minami *et al.*, “Oral administration of *Bifidobacterium breve* B-3 modifies metabolic functions in adults with obese tendencies in a randomized controlled trial”, *Journal of Nutritional Science*, vol.4, e17;1-7 (2015)

About *Bifidobacterium breve B-3*

Bifidobacterium breve B-3 is a room-temperature stable probiotic ingredient. This strain was originated from the intestines of newborn infants. It is capable of producing short-chain fatty acids, such as acetic acid and lactic acid, as well as other bioactive components, including conjugated linoleic acid and other fatty acid metabolites. *In vitro* research suggests it has the potential to improve intestinal barrier function, which could be the mechanism of action through which it exerts its anti-metabolic syndrome effect.

About Morinaga

Morinaga Milk Industry Co., Ltd. is the second largest dairy product company in Japan, employing 3,078 people. Founded in 1917, Morinaga exhibit excellence in the field of technology and sell not only dairy products but also the beneficial functional ingredients isolated from milk components. Morinaga has researched and developed human origin probiotics; *Bifidobacterium longum* BB536 which is one of the most clinically supported probiotics in the world and *Bifidobacterium breve* M-16V, clinically supported strain especially for infants including low-birth-weight infants.

¹ WebMD. What is metabolic syndrome? Dec. 21, 2013. <http://www.webmd.com/heart/metabolic-syndrome/metabolic-syndrome-what-is-it>

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