International Journal of Animal Biotechnology & Applications
ISSN: 2455–7315 (online)
Vol. 2: Issue 1
www.journalspub.com

Probiotics

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Abstract

Probiotics are live bacteria and yeasts that are good for health, especially digestive system. Usually bacteria are thought of as something that causes diseases. But our body is full of bacteria, both good and bad. Probiotics are often called "good" or "helpful" bacteria because they help keep our gut healthy. Thus, probiotics are live microorganisms that may be able to help prevent and treat some illnesses. Promoting a healthy digestive tract and a healthy immune system are their most widely studied benefits at this time. These are also commonly known as friendly, good, or healthy bacteria. Probiotics can be supplied through.

Keywords: helpful bacteria, probiotics

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INTRODUCTION

Probiotics are microorganisms that are believed to provide health benefits when consumed. The term probiotic is currently used to name ingested microorganisms associated with benefits for humans and animals. The term came into more common use after 1980. The introduction of the concept is generally attributed to Nobel recipient Élie Metchnikoff, who postulated that yogurt-consuming Bulgarian peasants lived longer lives because of this custom. He suggested in 1907 that "the dependence of the intestinal microbes on the food makes it possible to adopt measures to modify the flora in our bodies and to replace the harmful microbes by useful microbes". A significant expansion of the potential market for probiotics has led to higher requirements for scientific substantiation of putative benefits conferred by the microorganisms.[1-3]

The World Health Organization's (WHO) 2001 definition of probiotics is "live micro-organisms which, when administered in adequate amounts, confer a health benefit on the host".[15] Following this definition, a working group convened by the FAO/WHO in May 2002 issued the “Guidelines for the Evaluation of Probiotics in Food”. This first global effort was further developed in 2010; two expert groups of academic scientists and industry representatives made recommendations for the evaluation and validation of probiotic health claims.[4-7]

Probiotics have to be alive when administered. One of the concerns throughout the scientific literature resides in the viability and reproducibility on a large scale of the observed results, as well as the viability and stability during use and storage, and finally the ability to survive in stomach acids and then in the intestinal ecosystem.[5,7]

Probiotics have been the subject of research to see whether the health claims made for them have any supporting evidence.[8,9] Overall scientific demonstration of probiotic effects requires

defining a healthy microbiota and interactions between microbiota and host, and the difficulty to characterize probiotic effectiveness in health and disease. Recent developments of high-throughput sequencing technology and the consequent progresses of metagenomics represent a new approach for the future of probiotics research.[9,10]

Probiotics are ineffective in preventing allergies in children, with the possible exception of eczema. Probiotics help move food through your gut. Some common conditions they treat are:

- Irritable bowel syndrome
- Inflammatory bowel disease (IBD)
- Infectious diarrhea (caused by viruses, bacteria, or parasites)
- Antibiotic-related diarrhea

The consumption of probiotics may modestly help to control high blood pressure.

Some strains of lactic acid bacteria may affect *Helicobacter pylori* infections (which may cause peptic ulcers) in adults when used in combination with standard medical treatments, but no standard in medical practice or regulatory approval exists for such treatment.[9-11]

The manipulation of the gut microbiota is complex and may cause bacteria-host interactions. Although probiotics are considered to be safe, there are concerns about their safety in certain cases. Some people, such as those with immune compromise, short bowel syndrome, central venous catheters, cardiac valve disease and premature infants, may be at higher risk for adverse events. In severely ill people with inflammatory bowel disease there is a risk of the passage of viable bacteria from the gastrointestinal tract to the internal organs (bacterial translocation) and subsequent bacteremia, which can cause adverse health consequences. Rarely, consumption of probiotics may cause bacteremia, fungemia, and septicaemia, which is a potentially fatal disease, in children with lowered immune systems or who are already critically ill. In a clinical trial aimed at showing the effectiveness of probiotics in reducing childhood allergies, researchers gave 178 children either a probiotic or a placebo for the first six months of their lives. Those given the probiotic were more likely to develop a sensitivity to allergens.[12]

Although it has been suggested that probiotics (mainly lactobacillus) cause obesity in humans, no evidence has been found.

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