Chapter

Introductory Chapter: Oral Health by Using Probiotic Products

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1. Oral health

Oral health is one of the most important health issues and tooth decay raises a great deal of concern about that and with widespread public concern about the use of industrial drugs to reduce dental caries, nature-based treatments are highly welcomed. The second organ that has a diverse microbial community is the mouth, which contains more than 700 species of bacteria. Disruption of the natural microbial flora of the mouth through the consumption of various nutrients can have consequences for our health, such as oral and throat cancer, tooth loss, and periodontal disease [1].

2. Probiotic products

Many publications said using probiotic products can be a factor in improving the health of the digestive system, reproductive organs, and oral hygiene.

Probiotic bacteria should have the ability to adhere to and colonize surfaces in the oral cavity, have a good shelf life, and be nontoxic. Two main groups probiotic bacteria are *Lactobacillus* and *Bifidobacterium*. The *Lactobacillus*, as a member of oral microbial flora, can play an important role in the microcosm balance of the oral cavity. *B. bifidum*, *B. longum*, and *B. infantis* are the probiotic species of *Bifidobacterium*.

Today, with the increasing awareness of people about the beneficial effects of probiotic bacteria, consumption of functional foods is increasing. Functional foods are such food that promotes health [2, 3].

Functional foods must have three items:

1. they have a different effect from a nutrition standpoint;

2. they reduce the risk of pathological illnesses; and

3. they benefit the community and the consumer [4].

New food products are converted into probiotic foods by adding probiotic bacteria. These foods include a variety of different types such as cheese, ice cream, milk-based dessert, baby milk, and mayonnaise. The main thing is the texture of these foods [5].

The fourth mechanism of how probiotic bacteria work in the mouth include:

1. competition between probiotic bacteria and pathogenic bacteria in adhesion to mucus and teeth, which in this way prevents the pathogenic bacteria from attaching;

2. they can produce factors such as peroxide and bacteriocin, which act as antibacterial agents against oral pathogens; and

3. with the presence of probiotic bacteria, oral conditions change and the growth medium of pathogenic bacteria do not occur, such as the reduction of pH or alteration of the structural protein of salivary glands [6, 7].

4. Probiotics can have beneficial effects on dental health by stimulating non-specific immunity and regulating cellular and humoral immune responses.

3. Conclusion

Probiotics are becoming more common due to concerns about oral and dental diseases and increased consumer interest in natural remedies. Based on the research and the effect of probiotics in reducing the number of pathogenic bacteria in these organs, they can be used in foods.

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