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Health
Ingredients & Nutraceuticals

A SPECIAL SUPPLEMENT

Probiotics: Safety aspects and challenges in use

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BACTERIA has a reputation for causing disease, hence the idea of tossing down a few billion a day for the health seems literally—hard to swallow. But today the advances in medicine and scientific evidences suggest that bacteria can treat and even prevent some illnesses with foods and supplements containing certain kinds of live bacteria.

Probiotics today are big and a rapidly growing business and are today among the most popular dietary supplements. The term probiotic refers to dietary

supplements (tablets, capsules, powders, lozenges and gums) and foods (such as yoghurt and other fermented products) that contain “beneficial” or “friendly” bacteria. The organisms themselves are also called probiotics. They are tend to improve digestion, strengthen immunity, help in weight loss and also protect against periodontal disease, among other proposed benefits, as well as for general health.

Research claims that probiotics confer health benefits mainly by rebalancing the normal micro flora in the large intestine (colon). There are many general types of bacte-

ria used as probiotics (two common ones are Lactobacillus, Bifidobacterium), and many different species as well as strains within species. They have different physiological effects—and thus possibly different health benefits (as well as possible risks). Some yeasts, such as Saccharomyces, can also act as probiotics. Probiotic products may contain a single strain or many strains, and the number of organisms in a daily dose can range from 1 billion to more than 250 billion.

The health benefits of probiotic food supplements have been well documented, includ-

ing a lower risk of infections, improved digestion and even a reduced risk for some chronic diseases.

Amongst all these benefits there is an evolving question:

Will the friendly bacteria in these supplements and foods keep you healthy?

Along with many health benefits linked to taking probiotics, there can also be side effects. Most of these are minor and only affect a small percentage of the population. However, some people with serious illnesses or compromised immune systems may experience more severe complications. This article reviews the most common side effects of probiotics.

Unpleasant digestive symptoms

While most people do not experience side effects, the most commonly reported reaction to bacteria-based probiotic supplements is a increase in gas and bloating. Those taking yeast-based probiotics may experience constipation and increased thirst. It is not known exactly why some people experience these side effects. Some people experience an increase in gas, bloating, constipation or thirst when they start taking probiotics.

Amines in probiotic foods may trigger headache

Some probiotic-rich foods, like yoghurt, contain biogenic amines. Biogenic amines are substances that form when protein-containing foods age or are fermented by bacteria. The most common amines found in probiotic-rich foods include histamine, tyramine, tryptamine and phenylethylamine. Amines can excite the central nervous system, increase or decrease blood flow and may trigger headaches in people sensitive to the substance.

Probiotics can cause diarrhoea

Usually “bad” bacteria and viruses in gut cause diarrhoea. Recent research shows that probiotics are actually quite effective to treat diarrhoea by balancing “good” and “bad” bacteria. However, probiotics also

stimulate digestive tract which can lead to mild diarrhoea in the first two to three days of taking a new probiotic supplement.

Some strains can increase histamine levels

Some bacterial strains used in probiotic supplements can produce histamine inside the digestive tract of humans. Histamine is a molecule that is normally produced by immune system when it detects a threat. When histamine levels rise, blood vessels dilate to bring more blood to the affected area. The vessels also become more permeable so that immune cells can easily get into the relevant tissue to combat any pathogens.

This process creates redness and swelling in the affected area, and can also trigger allergy symptoms such as itching, watery eyes, runny nose or trouble breathing.

Diamine oxidase deficiency

Normally, histamine that is produced in digestive tract is naturally degraded by an enzyme called diamine oxidase (DAO). This enzyme inhibits histamine levels from rising enough to cause symptoms. However, some people with histamine intolerance have trouble properly breaking down the histamine in their bodies, seeing as they do not produce enough DAO. The excess histamine is then absorbed through the lining of the intestinal tract and into the bloodstream, causing symptoms similar to an allergic reaction. Theoretically, they may want to select probiotic supplements that do not contain histamine-producing bacteria, but to date, there has been no research on this specific area. Some histamine-producing probiotic strains include the following strains of Lactobacillus buchneri, helveticus, hilgardii and Streptococcus thermophilus.

Increase risk with lactose intolerance

While studies suggest that most people with lactose intolerance can tolerate up to 400 mg of lactose in medications or supplements, there have been case reports of adverse effects from

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Research being done to determine safety of probiotics

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probiotics. Since a small number of people with lactose intolerance may experience unpleasant gas and bloating when consuming lactose-containing probiotics, they may want to choose lactose-free products.

In addition to containing powerful probiotics, some supplements also contain prebiotics. These are plant fibres that humans cannot digest, but that bacteria can consume as food. The most common types are lactulose, insulin and various oligosaccharides. When a supplement contains both probiotic micro-organisms and prebiotic fibres, it is called a Synbiotic.

Some people experience gas and bloating when consuming Synbiotic.

Can increase infection risk

In some cases, the bacteria or yeasts found in probiotics can enter the bloodstream and cause infections in susceptible individuals. Those at greatest risk for infection from probiotics include people with suppressed immune systems, prolonged hospitalizations, venous catheters or those who have undergone recent surgeries. However, the risk of developing an infection is very low. When infections do occur, they typically respond well to traditional

antibiotics or anti-fungals. However, in rare cases, deaths have occurred. Research also suggests that people with severe acute pancreatitis should not take probiotics, as this may increase the risk of death.

Supplemental probiotics are generally well-tolerated by most. However, there are some conditions which make it difficult to properly metabolize excess D-lactate found in *L. acidophilus*. Unfortunately, this condition often goes unnoticed by new probiotic users because they believe what they are experiencing are die-off symptoms; the worsening of symptoms in response to the "die-off" of bad

bacteria in the body. The best probiotic supplement should offer varied strains of beneficial bacteria so digestive system will receive the most benefit.

Probiotics can cause skin problems

Consuming probiotics can lead to skin rashes and mild acne. An allergic reaction to one of the ingredients can cause skin rashes. For example, if probiotics is taken in the form of commercially fermented food, they are likely to consume biogenic amines like histamine. However, skin rashes can also be a sign that body eliminates toxins and waste. On the other hand, spe-

cific bacteria on skin or an imbalance of bacteria can cause acne. When probiotics are taken, bacteria is added in the body which might at first cause pimples.

Conclusion

Today a lot of research is going on to determine whether probiotics are really safe to be used very widely in almost all kinds of digestive problems. On the other hand, the use of probiotics is being tested so that they can help us reduce any fatalities.

(The author is a leading pharmaceutical consultant and Editor-in Chief of IJMToday)

Camillotek launches functional foods for metabolic correction


AFTER reaching milestones in formulating most pure and natural nutraceutical products for more than 16 years, Camillotek has now ventured into the sector of functional foods with a research back up in this field for almost seven years and are developing foods like shakes, beverages, soups and bars incorporated with clinically proven and time-tested nutraceutical formulas. Their interest now is to travel beyond all the barriers and notions in consumer's mind about capsules and tablets by incorporating the proven and time-tested formulas into everyday foods.

Their major focus will be on developing diabetic friendly, weight loss friendly, Keto and paleo friendly foods which are tasty and healthy. A few of their registered brands are Fensulin, Caratrim, Optimeal and prostrum. Fensulin is a proprietary formula with key ingredient as fenugreek for diabetic control as well as insulin resistance issues. It's proven to control the insulin levels and maintain the glucose metabolism.

Caratrim is another proprietary formula with the key

ingredient as Caralluma Fimbriata – an edible cactus that can do wonders in weight loss without any side effect and is tested for its results. Optimeal is again a proprietary of Camillotek which they have developed after years of research on low carbohydrate diets and metabolism. It is an ideal blend of nutrients with optimum amounts of protein, fats, vitamins, minerals, low carbohydrates, high fibres and herbal extracts. Moving on to their next proprietary called prostrum an immune formula, developed using colostrum and their own probiotic blend is a natural immune booster that is much needed in today's polluted scenario. These are just the few among hundreds of formulations that they have developed over years for a natural and healthy well being.


Camillotek will soon be launching a range of food products infused along with these wonderful formulas and also maintain the treats for our taste buds with no side effects or harms. Camillotek assures 100 per cent quality pertaining to all their products. All their products are as close to nature as possible and a tested completely for its safety. They believe and value in giving everyone a quality life. ♦



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