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Understanding Complex Carbohydrate Intolerance (CCI)

Complex carbohydrates are an essential part of a healthy diet. However, millions of people suffer from varying degrees of carbohydrate intolerance, resulting in embarrassing and uncomfortable digestive distress and avoidance of many healthy foods. Understanding the causes, ways to reduce symptoms and finding treatment can help CCI sufferers find relief and enjoy balanced diets rich in complex carbohydrates.

What is CCI?

Complex Carbohydrate Intolerance (CCI) is a broad term describing the range of symptoms that can occur when foods high in complex carbohydrates are consumed. Because the human body lacks the intestinal enzyme called alpha-galactosidase that is required to help break down complex carbohydrates, digestion is incomplete. As a result, complex carbohydrates ferment in the large intestines, causing the formation of bloating, pain and gastrointestinal discomfort.

What are Common Symptoms of CCI?

Flatulence, burping, bloating, cramping, abdominal pain and gastrointestinal discomfort are the most common symptoms of CCI. These symptoms are often a result of gas formation caused by the fermentation process in the intestine. Note: the symptoms of CCI can be similar to symptoms of serious medical conditions, including cardiac events. Individuals should consult their physicians with any questions about their medical health.

How Does Food Cause CCI?

Many nutritious foods contain high levels of complex carbohydrates. When consumed, undigested food passes from the small intestine into the large intestine, where normal, harmless bacteria break down food. During this process, the body does not digest and absorb some carbohydrates in the small intestine because of a shortage or absence of the enzyme alpha-galactosidase. This deficiency results in incomplete digestion of complex carbohydrates, causing the unabsorbed and undigested sugars to move into the large intestine. As a result, fermentation occurs and the undigested carbohydrates cause the body to experience bloating, pain and uncomfortable digestive episodes. Some foods that may cause symptoms of CCI include:

- Vegetables
Including beets, broccoli, brussels sprout, cabbage, carrots, cauliflower, corn, cucumbers, leeks, lettuce, onions, parsley and sweet peppers
- Legumes
Including black-eyed peas, bog beans, broad beans, chickpeas, field beans, lentils, lima beans, mung beans, peanuts, peas, pinto beans, red kidney beans and soybeans
- Grains/Cereals/Nuts/Seeds
Including barley, breakfast cereals, granola, oat bran, oat flour, pistachios, rice, bran, rye, sesame flour, sorghum grain, sunflower flour, wheat bran and whole-wheat flour
- Other Prepared Foods
Including bagels, baked beans, bean salads, chili, lentil soup, pasta, peanut butter, soy milk, split pea soup, stir-fried vegetables, stuffed cabbage, tofu and whole grain breads

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How can Symptoms of CCI be Reduced?

- Increase exercise to help gas move more quickly through the digestive tract, reducing the discomfort of CCI.
- Explore use of peppermint and other herbs that soothe the digestive tract, or try an over-the-counter product, such as PhaZyme, that may help belching and decrease bloating after large meals. However, it should be noted that peppermint and other herbs do not target the enzyme deficiency responsible for CCI discomfort.

How can the Symptoms of CCI be Prevented?

- Avoid or limit food intake that is high in complex carbohydrates. However, many high-carbohydrate foods are an excellent and necessary energy source rich in vitamins, minerals and fiber. They also provide important health benefits, including reducing the risk of developing coronary artery disease, some cancers and a variety of bowel problems.
- Provide your body the enzyme it's missing. The natural food enzyme alpha-galactosidase is currently found in the over-the-counter product Beano[®], which is the only effective preventative brand treatment for CCI. Beano is the only natural food enzyme dietary supplement that works with the body's digestive system to break down the complex sugars in gas-causing foods, making them more digestible, therefore preventing the symptoms of CCI before they start.

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