

Memorandum

TO: Diabetes Care and Education Dietetic Practice Group (DCE DPG) members

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TOPIC: Reproduction of the education handout *Prebiotic Basics: Helping Your Health from the Inside Out*.

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Prebiotic Basics:

Helping Your Health from the Inside Out

Supermarket and health food store shelves are teeming with foods and supplements containing health-promoting prebiotics. **But what exactly are prebiotics, and how can they benefit you?**

What are prebiotics?

Often confused with probiotics, **prebiotics** are non-digestible food ingredients that selectively feed probiotic bacteria. **Probiotics**, on the other hand, are “healthy” or “tummy-friendly” live bacteria, such as bifidobacteria and lactobacilli, that provide health benefits when ingested in the right amounts. Regular consumption of probiotics may help enhance your natural immune system and promote intestinal health and regularity. Together, prebiotics and probiotics work to maintain a healthy digestive system.

Prebiotics are beneficial to your overall health and well-being. Much like fiber, prebiotics are processed through the digestive system and fermented in the colon through bacterial activity. The fermentation process then leads to the growth of “healthy” gut bacteria.

Most Americans get some prebiotics in food ingredients each day without even realizing it. Two of the most common prebiotics are the natural fibers **inulin** (not to be confused with the medication insulin) and **oligofructose**, which are found in a number of fruits, vegetables and other plants. Other prebiotics include **galacto-oligosaccharide (GOS)**, **lactulose** and **resistant starch**. Found naturally in raw potatoes, cooked and cooled starchy foods and unripe bananas, resistant starch is also made commercially for use in food products.

Prebiotics do not raise blood glucose — which is good news for people with diabetes — nor do they increase insulin release. Since prebiotics are not broken down and absorbed in the upper intestine (but rather used to “feed” probiotic bacteria in the lower intestine), the calories they provide are minimal.

Do you need to consume prebiotics?

Prebiotic use is an individual choice. While prebiotics are generally safe, if you do choose to add them to

your meals on a regular basis, keep your health care team in the loop.

How do you choose a prebiotic product?

Used increasingly in new food products to improve their health benefits profile, prebiotics can be found in some packaged pasta; dairy and bakery items; cereal and cereal bars; and table spreads. Alternatively, prebiotics are available in supplement form as powders, capsules, tablets and drops.

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What health benefits do prebiotics provide?

- Allow beneficial bacteria to grow in place of harmful bacteria in the intestines
- Strengthen your body’s natural defenses
- Optimize bowel function and regularity
- Maintain a healthy digestive system
- Increase mineral absorption (such as calcium, iron, and magnesium)
- May lower cholesterol

To choose foods with potential prebiotic benefits, read food labels and keep these three tips in mind:

- 1 Identify prebiotics in ingredient lists.** Inulin may appear as *inulin* or *chicory root extract* and resistant starches may be listed as *corn starch*, *modified food starch*, and *maltodextrin*. The other prebiotics mentioned previously may also be listed by name.
- 2 Check out the fiber content.** For general good health, the more fiber, the better. Not all high-fiber foods are prebiotic; however, many prebiotic foods are high in fiber. For example, a 2 oz dry serving of traditional white pasta typically contains about 2 grams of fiber, while a white pasta with the prebiotic inulin added, provides 5 grams of fiber for the same serving size. (In fact, in manufacturing, adding inulin to food products is a subtle way to increase overall fiber content without compromising flavor.) Since inulin and oligofructose are fibers, food products that contain these prebiotic ingredients will reflect a higher fiber count in their labels' nutrition facts.
- 3 Look for label claims such as “with prebiotics” or “prebiotic.”** Such claims may appear on the package in a larger font, or alongside eye-catching graphics.

Natural sources of prebiotics:

- Asparagus
- Bananas
- Chicory root
- Garlic
- Jerusalem artichokes (sunchokes)
- Leeks
- Onion
- Wheat bran

By including foods that naturally contain prebiotics, you can enhance the health benefits of your meals and snacks.

Want more information?

- Review the “Functional Foods Fact Sheet: Probiotics and Prebiotics” published by the International Food Information Council: www.ific.org.
- Visit the International Scientific Association for Probiotics and Prebiotics: www.isapp.net.

If you have specific questions about how prebiotics might fit into your lifestyle, ask your registered dietitian.

How much is enough?

A recommended daily dose for prebiotics has not been established. If you want to increase the amount of prebiotics in your diet, it's a good idea to do so gradually. The use of products with prebiotics should be at consistent levels to achieve desired and ongoing benefits. Research suggests that as little as 8 grams per day of inulin can help promote the growth of good bacteria. The sample menu below demonstrates one way you can reach this goal in your diet. As for resistant starch, although 20 grams per day is recommended, low-dose ranges of 2.5 to 5 grams per day have demonstrated a prebiotic effect. Often, more than one serving of a food is needed to achieve these doses. Higher intakes of prebiotics (greater than 10 grams/day) may result in GI discomfort.

Pump up your prebiotics ... One meal at a time!

Breakfast

1 high fiber bar produced with inulin

- 1 c skim milk
- 1 c mixed berries

Lunch

Turkey wrap:

- 1 whole wheat tortilla (6 in)
- 2 oz turkey
- 1 oz slice cheese
- ½ c raw veggies
- 2 tsp light Italian dressing

1 c vegetable soup

4 oz yogurt produced with inulin

1 medium pear

Dinner

2 oz dry (~1 c cooked) low-digestible carb pasta produced with inulin

- 1 c spaghetti sauce
- 3 oz grilled chicken

1 c steamed asparagus

- 1 whole grain breadstick
- ½ c skim milk

Snack

1 medium banana

*Foods highlighted in this sample menu are rich sources of prebiotics. Please check the ingredient lists on those foods to find products made with inulin or other prebiotics.***

***Each meal totals ~60 grams carbohydrate; the snack is ~30 grams carbohydrate.*



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