

### What is celiac disease?

- ◆ A malabsorption disease caused by eating gluten - a protein found in foods made with wheat, rye and barley.
- ◆ Causes damage to the small intestine.
- ◆ Can cause food and medications to be absorbed poorly. This can lead to symptoms of starvation, nutrient and medication malabsorption.
- ◆ The only treatment is a strict gluten-free diet. If the diet is followed, the intestinal damage will slowly heal. This can take several months.
- ◆ The disease is lifelong. Intestinal damage occurs each time gluten is consumed.
- ◆ Celiac disease affects one person in every 133 people in the United States.

### Diabetes and celiac disease: The link

- ◆ There is a genetic link between Type 1 diabetes and celiac disease.
- ◆ Developing one of the diseases increases the risk of developing the other.
- ◆ The prevalence of celiac disease in people with Type 1 diabetes is about 6% worldwide.
- ◆ When a family has two children with Type 1 diabetes, there is a much higher chance some in the family will have celiac disease.
- ◆ Symptoms of celiac disease vary widely, but are often absent in persons with diabetes.
- ◆ Celiac disease can cause unstable blood sugar control.

### Signs of a malabsorption problem

|  | Diabetes | Celiac Disease |
|--|----------|----------------|
| Weight Loss  | x        | x              |
| GI symptoms (abdominal pain, bloating, cramping, diarrhea, constipation) | x        | x              |
| Ketones in urine (from protein wasting)                                  | x        |                |
| Less insulin needs (despite large food intake)                           | x        | x              |
| Abnormal labs  | x        | x              |

### Getting tested:

*People with Type 1 diabetes should be tested for celiac disease.*

*Initial screening should be done within 1 to 2 years of diagnosis of diabetes.*

*Periodic follow-up screening is advised every few years for persons at risk.*

*A normal test does not rule out later development of celiac disease - that is why follow-up screening is necessary.*

*Initial screening is done by a simple blood test.*

## CELIAC DISEASE

### Classic symptoms...

Gas, bloating, diarrhea, constipation, vomiting, weight loss, anemia, chronic fatigue, bone pain, muscle cramps.

### Other symptoms...

Balance problems, migraine headaches, seizures, behavior and memory problems, neuropathies, growth and maturation delays, infertility, bone disease, dental enamel defects, and more.

### Gluten-free starches

The following grains and starches are allowed on a gluten-free diet:

|               |            |
|---------------|------------|
| Amaranth      | Nut flours |
| Arrowroot     | Potato     |
| Beans/legumes | Quinoa     |
| Buckwheat     | Rice       |
| Corn          | Sorghum    |
| Millet        | Soy        |
| Montina       | Tapioca    |
|               | Teff       |

### Foods Containing Gluten

The following foods are not allowed on a gluten-free diet. This is not a complete listing.

|          |               |
|----------|---------------|
| Barley   | Malt and Malt |
| Bran     | Extract       |
| Bulgar   | Rye           |
| Couscous | Semolina      |
| Durum    | Spelt         |
| Einkorn  | Triticale     |
| Farro    | Wheat         |
| Kamut    | Wheat Germ    |
|          | Wheat Starch  |

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Advances in celiac disease are fast-paced. If this document is more than 2 years old, please visit our Web site for updated documents.

This information should not be used to diagnose or treat celiac disease or diabetes. See your health care team for diagnosis and treatment options specifically for you.

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*GIG is a nonprofit 501c3 national organization providing support for per persons with gluten intolerances, in order to live health, productive lives. GIG Branches provide support at a local level.*

*To make a donation or become a volunteer to GIG, visit our Web site or call the office at 253-833-6655.*