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Dear Parents,

Due to the coming holiday of Shavout, when we celebrate the giving of the Torah with festive dairy meals, I decided to write about a fairly common pediatric issue - Lactose Intolerance.

Lactose Intolerance *does not* mean an allergy to milk or dairy products. It means that a person is missing an enzyme that helps digest *Lactose*, a sugar found in milk. In the absence of this enzyme, the lactose stays in our gut and is not absorbed into our bodies. Subsequently, we feel abdominal pains, nausea and bloating caused by extra gas in our abdomen. This could also cause loose bowel movements.

As I mentioned previously, infectious or viral diarrhea renders all of us temporarily lactose intolerant. This is why we should avoid dairy products when we have diarrhea. But after the infection and the diarrhea resolves, our bodies return to producing lactase, and we can return to our normal, dairy diets.

Patients with Lactose Intolerance will *always* be missing the lactase enzyme, and can have *persistent* abdominal pains. The deficiency is *uncommon in children under 2 years old*. Seventy five percent of all African American, Mexican American and Native American adults are lactose intolerant. This does not mean that 75% of all of your children will be lactose intolerant, because different people lose their enzyme at different stages of life. Some will lose it at 6 years old and some at 30 years old.

The most common cause of Lactose Intolerance is genetics. In Finland there are some families that have a genetic, congenital lactase deficiency that presents at birth. These babies are born without any ability to digest lactose and often cannot even tolerate their mother's milk.

How to Diagnose Lactose Intolerance

Here is the good news. To accurately diagnose this condition, you do not need more than a pencil and a piece of paper. Many parents come to our office and bring us their achy children. When we try to make a proper diagnosis for abdominal pains, we need some information. The 2 most vitals pieces of information are - bowel movement appearance and any triggers to the pain.

Interestingly, when we ask the parents, "Is your child constipated?" Most of the time the parent dismisses this possibility in a heart beat. But a minute later, when we ask the child how often he defecates, he often says "twice a week." Often he adds that his bowel movements are small, and hard as a little rock. The same is true with Lactose Intolerance. Parents are quick to say that they are confident that their child can digest milk, but after more careful examination, they discover that there is a clear association between the abdominal pains and dairy ingestion.

So, if your child has recurrent abdominal pains, start recording the episodes of pains in a small notebook. Write down what the child ate at the meal preceding the pains. Write down the daily appearance of your child's bowel movements (or lack of a BM). Pains from Lactose Intolerance resume 30-120 minutes after milk or dairy ingestion. In this manner, you can diagnose your child's problems more accurately than we physicians.

As an example to this, I saw a 7 year old patient with recurrent abdominal pains recently. Her mother was sure she had no problems digesting milk. She was treated for slight constipation and reflux by a pediatric gastroenterologist, but her symptoms persisted. She proceeded to have an endoscopy of her upper GI tract that showed mild inflammation of the stomach (gastritis). We all thought that she had some reflux related aches, but we were all wrong. Two weeks ago, her mother came into my office smiling. She figured it out - the little girl was Lactose Intolerant! Her mother started tracking her pains more carefully when she discovered the culprit was dairy.

The other way to diagnose Lactose Intolerance is via a special hydrogen breath test. This test is done at a Pediatric GI office and can accurately measure the gas produced by the gut in the absence of the lactase enzyme. A series of blood tests after ingesting lactose could also be used to diagnose Lactose Intolerance and finally, some specific stool studies could also aid in a diagnosis.

To treat Lactose Intolerance, patients may take a pill containing the lactase enzyme with their dairy meals. Lactaid pills should be ingested together with the dairy food, but not much prior to the meal. This is because the acid in the stomach will kill the lactase enzyme. You may find however, that your child is not completely lactose intolerant and may be able to eat foods containing a small amount of lactose.

Here are some facts and tips:

The good bacteria in probiotics produce a small amount of lactase and can help in the digestion of milk. That is why some lactose intolerant patients may enjoy yogurts - pain free.

Aged Cheeses - undergo fermentation and contain higher fat, and therefore have up to 90% *less* lactose than whole milk! Unfortunately, most of the cheese we buy is commercially manufactured by processes that do not have the same lactose-reducing properties.

Whole Milk vs Low fat Milk - Since lactose is a water soluble substance, fattier milk products contain a *lower percentage of lactose* than low fat dairy products. This is why fat milk, cheese low and yogurts will actually have a higher amount of lactose than full fat products.

Butter - The butter-making process separates the majority of the milk's water components from the fat components. Therefore, lactose will be present in small quantities in butter.

Yogurts - Due to the fact that yogurt is made with live cultured bacteria, it contains some natural lactase. This is why some lactose intolerant patients can be more tolerant of yogurt. (Remember that Lebens and Dairy Puddings such as Milky *do not* contain live cultured bacteria).

Sour Cream - Most sour cream is made with milk solids and thus, contain more lactose.

Ice Cream - contains a fairly high amount of lactose

To see a chart that contains the typical lactose levels found in various food, please visit my website at www.doctorsimai.com

Lact-Aid pills - Should be ingested together with the dairy food, but not much prior to the meal. This is because the acid in the stomach will kill the lactase enzyme.

For patients that are extremely sensitive to lactose, we are lucky to have many lactaid products that contain no lactose, and many non dairy creamers, cheeses and milk substitutes.

I hope that this information will help you become more familiar with some of the causes of sour faces that do not smile after eating dairy products... and say - **cheese!**

Wishing you and happy and healthy Yom Tov,

David Elazar Simai M.D.

P.S. Thank you Sheryl Weisberger (aka. "Nonnie") for your diligent and expeditious editing work over the past year!!!