

What to Tell your Clients about Lactose Intolerance: Separating Myth from Reality

"My kids are allergic to milk."

"My chiropractor told me to give up all dairy foods."

"I've heard that people become lactose intolerant as they age."

We hear such comments frequently – in the health care field, in the grocery store, among family, friends and neighbors. Reports of lactose intolerance are at an all-time high, grossly overestimating the incidence of true lactose intolerance. Indeed, well-meaning health professionals can even promote these misperceptions through misinterpreting symptoms and the all-too-easy solution of prescribing elimination diets. The unfortunate result is that people who presume they are lactose intolerant typically avoid all dairy products, potentially putting their health and nutritional status at significant risk. The current "calcium crisis" in this country, with most populations and age groups falling far below the national calcium recommendations, may be contributing to a higher incidence of osteoporosis, hypertension and certain types of cancer. As dairy products provide about 73% of the calcium in the U.S. food supply, it is critical that people do not exclude this food group from their diets. Even individuals who are truly lactose intolerant can control their symptoms through modified consumption of dairy products, helping to ensure their nutritional health. This monograph examines the facts and fallacies surrounding lactose intolerance so that you can provide accurate information and appropriate recommendations to your clients.

Definitions

Lactose – sugar found naturally in all mammalian milk and in most products derived from it.

Lactose maldigestion – the incomplete breakdown of lactose in the intestinal tract, due to low levels of the enzyme lactase.

Lactose intolerance – the occurrence of symptoms in a person with lactose maldigestion.

Milk protein allergy – a reaction to one or more of cow's milk proteins mediated by the body's immune system.

Prevalence

In the U.S. the prevalence of lactose maldigestion is about 15% in Caucasians, 53% in Mexican Americans, 80% in African Americans and 90% in Asian Americans (1,2). In all, an estimated 30-50 million Americans have lactose maldigestion (1). However, the proportion of those who experience symptoms (i.e. lactose intolerance) is much less. Many individuals with lactose maldigestion do not even know that they have the condition and many people who think they are lactose intolerant, in fact, do not have the condition. In one study, 32% of the subjects from the general population had lactose maldigestion but did not

experience symptoms; only 4% had *both* lactose maldigestion and intolerance (3). The development of symptoms, i.e. lactose intolerance, depends on a variety of biological, psychological and dietary factors. "Transient" lactose intolerance, caused by mild viral infections that may result in a shut-down of lactase production, typically only lasts a few weeks. As far as true milk allergies are concerned, only about 1 to 3% of the pediatric population is affected (4,5) and the prevalence in adults is even lower. Most children out-grow milk allergies by three years of age.

Clinical Symptoms & Risks

Low levels of the enzyme lactase do not necessarily result in symptoms of lactose intolerance (6) and in fact many individuals with lactose maldigestion are unaware of their condition. If clinical symptoms do occur they may include diarrhea, flatulence, abdominal bloating and cramps. These symptoms result from the gases produced by intestinal bacteria fermenting the undigested lactose in the large intestine. In general, the larger the amount of lactose consumed in relation to intestinal lactase and the faster the rate of gastric emptying, the more frequent and severe are the symptoms (7). Psychological factors are also involved in the reporting of symptoms (8).

Typically, people with lactose intolerance either completely or partially give up dairy products. Such elimination diets not only cause inadequate intakes of calcium and other essential nutrients, but also deprive the individual of other beneficial components in dairy foods such as sphingolipids, probiotics, bioactive peptides and absorptive factors. Calcium intakes in lactose intolerant subjects are typically 33 to 45% lower than in individuals without the condition (3,9). Long-term calcium deficiency increases the risk of developing osteoporosis, hypertension and possibly some types of cancer (10). One study showed that women who believed they were lactose intolerant had lower spinal and femur bone mineral densities (9), an indicator of bone health.

Management

In reality, avoiding dairy products is not the only solution to lactose intolerance and including small amounts of dairy may even improve tolerance to lactose (11). The majority of lactose maldigesters can consume the amounts of lactose found in typical servings of milk and dairy products without experiencing symptoms (6,12). A recent study demonstrated that most people with lactose maldigestion can consume up to 2 cups of milk per day if consumed with meals and spread out over the day (13). It is critical for people to realize that lactose intolerance is not an “all or nothing” condition and that they will do best by determining their individual threshold intake of lactose. Those with transient lactose intolerance should be encouraged to gradually

reintroduce foods containing lactose back into their diets a month or two after the discomfort started.

Keep in mind that individuals may be getting nutritional advice from a number of different sources. Naturopathic health professionals and those who practice traditional Chinese medicine may be inclined to suggest elimination diets to alleviate their patients’ symptoms, in effect eliminating one or more entire food groups from their diets. It is important to encourage a re-challenge with lactose once the symptoms have subsided and to gradually incorporate this food group back into their diets. You can help your client put into perspective all the advice he or she is hearing and together craft a solution conducive to both short- and long-term health goals.

Below are some suggestions to help your clients manage symptoms of lactose intolerance:

- Consume dairy foods in smaller amounts and with food.
- Try flavored milks such as chocolate – these may be better tolerated.
- Try yogurt and hard cheeses (cheddar, Monterey Jack, Mozzarella) – these contain less lactose.
- Increase consumption of dairy products gradually, to rebuild the ability to digest lactose.

- Consider a commercial lactase preparation such as Lactaid™ or Dairy Ease™ to help digest the lactose in dairy products.
- Use lactose-reduced or lactose-free milk.
- Consume other good food sources of calcium like broccoli, kale, almonds and fortified foods to help meet calcium requirements.

A Call to Action

You as a health professional are in the perfect position to re-educate your clients on the facts and fallacies of lactose intolerance. While health professionals must be respectful of cultural preferences that influence consumption of dairy products, it is important not to over-diagnose a condition that may greatly impact your clients’ dietary habits, thereby increasing their risk for a number of chronic diseases. The calcium crisis we are currently facing in this country is a compelling reason to incorporate dairy foods back into the diets of individ-

uals who may have avoided these foods for some time. Encouraging your clients to determine what level of lactose they can comfortably tolerate, and providing suggestions on how to incorporate an appropriate amount of these foods into their diets, will minimize any lactose-related symptoms and will provide them with the nutrients they need. Considering health care’s current focus on disease prevention and the client’s desire to attain optimal health, this approach is a win-win for everyone.

References

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Feel free to photocopy the attached page and distribute to those clients interested in lactose intolerance.

Lactose Intolerance: Separating Myth from Reality

Do you think you might have lactose intolerance, or do you know someone who does? If so, you are likely getting advice from a wide range of people on what you should and shouldn't be eating. Unfortunately, there is a large amount of misinformation on lactose intolerance. This misinformation may result in serious nutritional deficiencies and place people at risk for a number of chronic diseases. It is important to be well informed about this condition so that you can make educated decisions regarding your own health and help your friends and loved ones do the same. Following are some common questions and answers about lactose intolerance to help you separate the myth from reality:

Q: What is lactose?

Lactose is the sugar found naturally in milk and milk products.

Q: What is lactose intolerance?

Lactose intolerance refers to digestive disturbances caused by not having enough intestinal lactase, the enzyme needed to break down lactose.

Q: Drinking milk gives me gas and makes me feel bloated. Does that mean I am allergic to milk?

True milk allergies are very uncommon. Only about 1 to 3% of children experience cow's milk allergy and they usually outgrow this by age three. In adults the incidence is even lower. Chances are you are not allergic to milk but have a mild degree of lactose intolerance. Try consuming smaller amounts to see what your "threshold" is for digesting lactose. Using the tips below will also ensure that you are getting enough of the important nutrients in dairy foods without experiencing symptoms.

Q: Does lactose intolerance mean I should avoid all milk and dairy products?

No. In most cases it is neither necessary nor nutritionally wise to consume a lactose-free diet. A recent study showed that most people with lactose intolerance can consume up to 2 cups of milk per day, one in the morning and one at night, without experiencing symptoms. Dairy products are an excellent source of calcium, which is needed to develop and maintain strong bones, as well as a host of other nutrients. People who give up dairy products consume far less calcium than they need, putting themselves at risk for chronic diseases such as osteoporosis, hypertension and certain types of cancer. If you have an extreme case of lactose intolerance, talk to a registered dietitian about how to get enough of these nutrients from other sources.

Q: If I can get my calcium through supplements and fortified foods like orange juice, why should I even bother with milk products?

Not only does cow's milk contain a variety of important nutrients including calcium, protein, magnesium, phosphorus, zinc and vitamins A and D, but the nutrients are available in a highly absorbable form. In addition, new research is showing there may be a number of other

components in milk and milk products that are beneficial to health. Fortified foods and supplements don't come close to providing this unique "package of nutrients" available only through dairy products.

Q: Everyone is talking about calcium these days. Why do I need it and how much is enough?

Calcium is necessary for the growth and maintenance of your bones and teeth. Kids and adults who do not consume enough of this important nutrient are putting themselves at risk for osteoporosis and other chronic diseases. For adults aged 20 through 50 the calcium requirement is 1000 milligrams per day. For adults over 51 years of age, the requirement is 1200 milligrams per day. This translates into about three to four servings of high calcium foods every day. The following chart shows some good food sources of calcium.

	Serving size	Milligrams calcium
Yogurt	1 cup	355
Milk (non-fat, 1%, 2% or whole)	1 cup	300
Cheese	1- ½ oz.	280
Tofu processed with calcium	½ cup	250
Cream soup, made with milk	1 cup	213
Frozen yogurt	½ cup	152
Ice cream	½ cup	85
Almonds	¼ cup	80
Dried beans or peas	1 cup	70
Sardines	1 3-inch	46
Kale	½ cup	45
Broccoli	½ cup	40

Q: Aren't there some ethnic groups who are not meant to consume dairy products after infancy?

Although some ethnic groups such as African Americans and Asian Americans have a higher chance of developing lactose intolerance, this does not mean they have to avoid all dairy foods. Throughout our lifecycle we are fortunate enough to be able to take advantage of the nutritional qualities of a wide variety of dairy products (milk, cheese, yogurt and ice cream).

Following are some tips to help you include dairy products in your diet if you are diagnosed with lactose intolerance:

- T Drink milk with meals or snacks. Symptoms are generally milder if milk is consumed with other foods.
- T Consume dairy products in smaller amounts – if one cup of milk makes you uncomfortable, try one-half cup!
- T Try chocolate milk – it may be better tolerated and is nutritionally comparable to regular milk.
- T Buy lactose-reduced or lactose-free milk.
- T Eat yogurt and hard cheeses (Cheddar, Monterey Jack and Mozzarella) – these have as much calcium but less lactose than softer cheeses and milk.
- T Increase your consumption of milk products gradually. Your body will slowly build up the enzyme it needs to digest the lactose.
- T If you've been avoiding dairy products due to a recent bout of stomach flu or other virus, gradually introduce them back into your diet after you've fully recovered.
- T Take a commercial lactase preparation such as Lactaid™ when consuming dairy products.
- T Include other good food sources of calcium in your diet, such as broccoli, kale, almonds and fortified foods.

Take the Calcium Quiz on the Dairy Council of California web site at:
www.dairycouncilofca.org/activ-page.htm
to see how your current calcium consumption stacks up against your
requirement and for additional suggestions on how to meet your calcium
requirement.