

Let's start with an example pretty much everyone is familiar with: dairy. Most people know someone who's lactose intolerant. These individuals lack the enzyme lactase (to varying degrees) that allows them to break down lactose, the sugar in milk. If they consume a large amount of lactose-containing dairy, the undigested lactose builds up in the gut causing uncomfortable symptoms like bloating and diarrhea until the stuff passes through the digestive tract. Though uncomfortable, that gastrointestinal distress is never life-threatening. As such, they can absolutely drink a milkshake (though they will likely pay for it later).

On the other hand, you probably don't know someone with a milk allergy because that's much less common. But if you do, you know they can't drink milkshakes. That's because they have a true allergy, which means the root of the problem is not in their digestive systems, but rather in their immune systems. Allergists call these responses "IgE-mediated" because, well, they're mediated by a protein called Immunoglobulin E. IgE is an antibody that your immune system produces whose job it is to identify intruders like parasites. People with allergies accidentally produce IgE molecules that identify harmless proteins like those in peanuts, shellfish, or milk as being dangerous. That means upon ingestion, IgE are like the alarm that kicks up a massive immune response, recruiting histamines and other immune cells that kill the invader. It's this overreaction that causes your throat to close or your blood pressure to drop precipitously, or any of the other allergic symptoms that transcend one bodily organ and extend into the respiratory system or perhaps the skin or cardiovascular system. This response can absolutely be life threatening.