Optimizing Metabolism: Preparing for the Food Allergy Storm by Ingrid Kohlstadt MD, MPH

Introduction

The view from my office window is white. No one pulled a blind separating me from Historic Annapolis. Pearl, dove, and ivory is the visual symphony conducted by the winter storm, clouds hung low, rich with promise of more snow, and icicles clung to the awning like fangs in the mouth of Winter herself. So here I am marveling at the storm which exceeds my collective childhood memories, grateful to have been prepared for it thus far, and questioning the influence of global climate change. Today I write urging readers to prepare for a different kind of storm, the unexplained epidemic of severe, sometimes fatal food allergies.

Epidemiology

The population is becoming more allergic. The United Kingdom's (UK) National Health Service's recent release reported a sharp rise in the number of people with fatal allergies amidst a 15 year annual rise in allergy reporting. Raised general awareness of allergies increases reporting, but can not explain these numbers, especially the rise in fatalities.

There is more data. Prescriptions for epinephrine injectors (Epipens) increased by 700% in 13 years and hospital admission in the UK increased by a quarter. The disease demographics have changed. No longer is this a childhood condition. An increased number of adults, especially women in their early fifties, are developing allergies for the first time. Foods they ate their entire life are now causing them severe allergic reactions. The trend is also occurring in the United States.

The food allergy epidemic is not limited to IgE-mediated type I reactions, those associated with anaphylaxis. Prevalence of celiac disease, mediated by IgG and other immune reactions, is also increasing. This food allergy, unlike most, can be evaluated with a blood test.

Probing the biologic basis

There are likely to be many predisposing factors in our environment. Mercury as a pollutant has been shown to be a factor and its presence in our environment is increasing. Diets of poor quality have *trans* fats, woefully inadequate fiber, excessive refined carbohydrates, insufficient antioxidants, and few polyphenolic compounds. Changes in agricultural practices can make the same whole foods more allergenic than they were

before. The high usage of ever-stronger heartburn medications is likely to contribute, because immunogenic proteins are only properly digested with a low gastric pH.

Ten practical prevention steps

The UK data reports the most common food triggers for IgE-mediated (type I) allergies to be eggs, nuts, fish, dairy products, fruits and vegetables. An established allergy to a food, preferably confirmed by diagnostic testing, requires longterm, often lifelong, avoidance of that food.

Prevention does not involve eliminating potentially allergenic, often healthful foods. However, people who do not have established food allergies and want to protect against them, can take several reasonable steps with high benefits and low cost of time, health risk, money.

- Optimize vitamin D which has been shown to be immune system modulating.

- Eat sufficient omega-3 fats to protect intestinal cells. Eliminate *trans* fats.

- Incorporate prebiotics and probiotics into the diet itself, and if that is not possible, supplement with fiber and probiotic supplements. Healthful microorganisms work in several ways to protect the integrity of the gastrointestinal tract and its large immune system.

- Eat lots of carbohydrates, which should be all the colors of the rainbow. Eliminate refined carbohydrates such as added sugar and white bread. The naturally occurring colorful components of foods, many of them bioactive polyphenolic compounds, can stabilize the mast cells associated with allergies. In contrast starches in high quantities prime the intestine for allergenic responses.

- Optimize mineral intake. As a rule of thumb the body replete with minerals absorbs fewer metal toxins. Since mercury promotes food allergies and selenium can block both its absorption and its actions in the body, selenium supplementation may be especially beneficial.

- Stay hydrated so linings throughout the body are hydrated. In addition to drinking fluids, breathe them. Use a room humidifier at nighttime to humidify the air, but be careful not to encourage mildew.

- Avoid breathing pollutants indoors and out. The lungs respond differently to potential allergen exposures than the intestines do. Scientists determine which of the millions of synthetic chemicals are detrimental to human health in part by studying their effects in the marine ecosystem, where chemicals travel through water rather than air and many species have gills instead of lungs. I recommend a

high-end HEPA filter for those with even the slightest allergies to indoor air pollutants.

- Do not take antihistamines (H1 blockers), even over the counter medications, without considering the side effects. Two frequently overlooked side effects are : 1. These medications are drying and drying out the body's tissues makes allergies of all kinds worse. Long-term.

- 2. Antihistamines block the satiety hormone leptin, thereby increasing appetite and promoting weight gain, which may also make allergies worse.

- Don't take medication for heartburn such as H2 blockers and proton pump inhibitors with any frequency without first considering the potential side effects. Stomach acid is essential for digestion and blocking it not only reduces the absorption of several nutrients, among them, protein. While protein insufficiency can be a consideration for some people, the primary concern is that the poorly digested protein then entering the immune-rich small intestines promotes food allergies.

- Early detection of food allergies, especially gluten sensitivity, can help prompt treatment.

Conclusion

More people across continents are developing allergies and the onset is not just in childhood. The 15-year trend is unexplained. However, there are steps to take to reduce sensitization to healthful foods and prepare for the coming "allergenic" blizzard.

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