

Let Food Be Thy Medicine Exploring Diet in Treatment

By Natalie Digate Muth, M.D.,

Hippocrates, the ancient father of western medicine, famously said: "Let food be thy medicine and medicine be thy food." Though modern physicians tend to rely less heavily on dietary practices to treat disease than doctors of the past, evidence is clear that for some diseases the right combination of nutrients can prove life-altering.

Proven to Work

Take epilepsy, for example. Nearly 100 years ago, the doctors and families of children plagued by seizures discovered that a ketogenic diet, which is high in fat, moderate in protein, and low in carbohydrate, helped reduce seizures. Since then hundreds of studies have been conducted which confirm that following a ketogenic diet can reduce seizures by an average of 50 percent (Kossoff and Rho, 2009).

Results were even more profound when the diet followed a one- to two-day fast in the hospital and calorie and fluid restriction (Kossoff and Rho, 2009). While a ketogenic diet is not easy to follow, newer research suggests that the more lenient modified Atkin's diet and low glycemic-index diet might do the trick nearly as well as the more stringent ketogenic diet (Kossoff and Rho, 2009).

Dietary management trumps all other therapies in some diseases such as phenylketonuria (PKU) and celiac disease. PKU is an inherited disease that affects the breakdown of the protein phenylalanine—a compound present as aspartame in sugar-substituted products such as diet soda as well as a long list of other protein-rich foods including milk, cheese, nuts, seeds, poultry and fish. High levels of phenylalanine in the blood damage the nervous system and can lead to mental handicap, especially in the fetuses of pregnant women with poorly controlled PKU. However, adherence to a phenylalanine-free diet fully eliminates the risks of PKU and leads to improved IQ and neuropsychological outcomes (Poustie et al., 2009).

Just as people with PKU cannot tolerate phenylalanine, people with celiac disease cannot absorb gluten, a protein in wheat, rye and barley. Gluten induces an autoimmune response that damages the absorptive cells in the small intestine. The damage can ultimately lead to severe

Food Be Medicine: The Role of Eating Disease

H., R.D.



malnutrition. When people with celiac disease consume gluten-containing products they may develop abdominal pain and bloating, chronic diarrhea, vomiting, constipation and pale, foul-smelling stool. The best treatment for celiac disease, then, is not some fancy medicine, but rather strict adherence to a gluten-free diet.

Cardiovascular disease is also highly responsive to diet. The scientific evidence is convincing that following a Mediterranean-type diet rich in fruits, vegetables, legumes, whole grains and olive oil, and moderate in red wine, not only wards off cardiovascular disease but also is important for the treatment of people who already show signs of heart disease (Sofi et al., 2008). (Take a look at the sidebar at right for a compelling example of the power of raw foods in decreasing risk.) As an added benefit, the Mediterranean diet also helps to prevent the onset of Alzheimer's disease, even in people who already suffer from mental decline (Scarmeas et al., 2009).

While it is well-known that diet is important in the management of diabetes, the most effective diet is under debate. However, recent results from a review of 11 randomized controlled trials lasting one to 12 months suggest that low-glycemic foods such as lentils, beans and oats, which provide a gradual supply of sugar into the bloodstream, are associated with improved blood-sugar control and decreased number of hypoglycemic episodes. Notably, none of the studies reported on mortality, morbidity or costs (Thomas and Elliott, 2009).

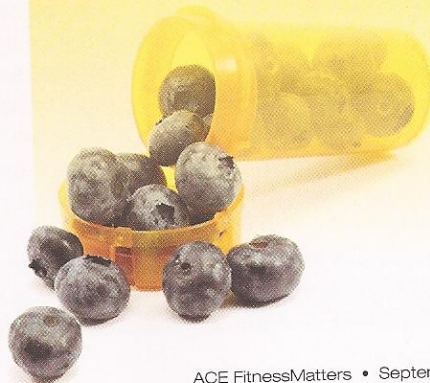
We Just Don't Know

For some diseases, many people have long believed that certain dietary practices help to ease the pain and disability associated with the illness, although the research to date either does not support the beliefs or, more commonly, is inconclusive. Rheumatoid arthritis (RA) is a debilitating inflammatory disease that affects the joints of the hands and feet causing swelling, pain and stiffness that progressively worsens with time. People with RA have experimented with many diets to improve symptoms, from a 10-day fast to eliminating meat and animal products to adopting a Mediterranean diet. While some studies showed benefits to these diets—for example, a fast followed by a vegetarian diet or adherence to a Cretan Mediterranean diet may

Continued on page 16

11 Pounds of Raw Foods + A Little Oily Fish = A Very Healthy Heart

In a 2007 made-for-TV experiment in Britain, nine willing volunteers were locked up in a zoo for 12 days, and left to eat the dietitian-designed and -approved diet of 11 pounds of fruits, vegetables, nuts, honey and water (a little oily fish was added in the second week) a day. While hardly a rigorous scientific study, the end results were impressive: Volunteers dropped their cholesterol by 23 percent, an amount usually achieved only by statins; lowered their blood pressure by nearly as much; and, without trying, lost a whopping 10 pounds. While the extent of the changes may not persist over time, the study does serve as a good reminder that diet plays a significant role in the development and treatment of cardiovascular disease. Read more about this experiment at www.bbc.co.uk/sn/humanbody/truthaboutfood/healthy/. **A**



Let Food Be Thy Medicine

Continued from page 5


reduce pain but not morning stiffness of physical function—a Cochrane review of 15 good-quality and relevant studies on the topic concluded that it still is uncertain whether specific diets help improve RA symptoms (Hagen et al., 2009).

Although well over half of all people with multiple sclerosis rely on some type of diet or dietary supplement to help manage the disease, scant high-quality scientific data exists to evaluate the effectiveness of these dietary regimens, which can range from supplementation with polyunsaturated fatty acids to gluten- and milk-free diets and Ginkgo biloba extracts (Farinotti et al., 2007). Recurrent abdominal pain is another very common ailment affecting children and adults alike. Many people have tried fiber supplements, lactose-free diets and probiotic supplementation to help alleviate symptoms, but the limited research available provides no evidence that the dietary measures actually help (Huertas-Ceballos et al., 2009).

Perhaps no illness has sparked more controversy and interest in alternative treatment options than autism. A growing number of people believe strongly that certain dietary practices such as the elimination of gluten from the diet may help improve behavior and cognitive and social functioning for people with autism. Despite widespread interest, a very limited number of quality studies have been done on this

topic, and their results are equivocal. The results of one study found that a combined gluten- and casein-free (a protein found in dairy products) diet reduced autistic traits while another study found no difference (Millward et al., 2008). Both studies are limited by a very small sample size and neither evaluated potential harms of the restricted diets (Millward et al., 2008). Clearly this is an area that requires much more extensive research.

Adding it Up

Although healers have known for thousands of years that diet can play a potent role in the treatment of disease, the precise effects of diet on specific diseases remains largely unknown. As the research accumulates, the role of diet in helping to prevent and treat disease will grow for some diseases, and perhaps be diminished for others. While certainly not every medical condition is best treated with a particular diet, the potential role of food as medicine must not be overlooked. 

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